



COUNTY COUNCIL OF NORTHUMBERLAND.

ABSTRACT
OF THE
ANNUAL REPORTS
OF THE
MEDICAL OFFICERS OF HEALTH
FOR THE YEAR 1896,
WITH STATISTICAL INFORMATION AND A
REPORT
ON THE
Sanitary Condition of the Administrative County.

BY
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1897.



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NORTHUMBERLAND COUNTY COUNCIL.

REPORT OF THE COUNTY MEDICAL OFFICER OF HEALTH FOR THE YEAR ENDING 31st DECEMBER, 1896.

TO THE CHAIRMAN AND MEMBERS OF THE PROPERTY AND SANITATION
COMMITTEE OF THE SAID COUNCIL.

GENTLEMEN,—

I have pleasure in presenting herewith my Summary of the Annual Reports of the Medical Officers of Health for the year ending 31st December, 1896, in which I have dealt with (a) the sanitary condition and requirements of the county as a whole, and (b) with those of each sanitary district, as ascertained both from the annual reports received, and from personal observation and inspection, so far as time and opportunity have allowed.

Reports have been received from all the Medical Officers of Health in the administrative county. Of the 34 reports received 21 were printed, being an increase of 4 printed, as compared with 1895, and 13 were in manuscript form.

Those from the urban districts of Berwick-upon-Tweed, Cowpen, Cramlington, Gosforth, Newbiggin-by-the-Sea, Rothbury, Seghill, and Whitley and Monkseaton, and from the rural districts of Bellingham, Haltwhistle, Morpeth, Norham, and Rothbury were *not* printed.

As I have before remarked, “it is of the utmost importance that the report of every Medical Officer of Health should be printed and circulated by his sanitary authority. There is but little encouragement to any Medical Officer of Health to expend the time necessary for the production of a really good report, if he knows that it will only be read (if read at all) to those members of his district council, who happen to be present when his report is handed in, and that, henceforward, it will never be seen or heard of.

“Moreover, by the latter course the general public are prevented from acquiring very valuable information on sanitary matters which, otherwise, they possibly may only obtain by painful experience.

“It is surely not saying too much to aver that few owners, occupiers, or builders of house property, could read the report of a Medical Officer of Health without learning something, not thoroughly understood by them previously, and that not only is this impossible in those districts in which the report is not printed, but that, probably, some members of the district council (who are appointed to safeguard the sanitary surroundings of those living in their district) never hear or see the report of their Medical Officer of Health.

“The only end attained by not having these reports printed is a slight saving of expense, as the cost of printing 100 copies of an average report would probably amount to about £2.”

In some of the annual reports the very admirable plan is adopted of dividing the sanitary districts into localities with the estimated population and death rates (both from general and special causes) of *each sub-division* appended. This system is carried out in the reports from the Medical Officers of Health for Cowpen, Berwick-upon-Tweed, Blyth South, Tynemouth Urban, Rothbury Rural, and Tynemouth No. 1, and the great value of this step is seen by comparing the general death rate for the whole of say, the Cowpen district—(22·16) with that for portions of the district in which it runs

up to 24, 27, 31, and 39 per 1,000. Taking the zymotic death rate also for the same year, which is 4 per 1,000 for the whole district, we find it reaching 10 per 1,000 in one of the sub-divisions.

In each of the reports from the urban districts of Cramlington, Gosforth, Morpeth, Newburn, Weetslade, Wlilington Quay, and in the rural districts of Alnwick, Belford, Bellingham, Castle Ward, Glendale, Haltwhistle, and Tyne-mouth No. 2, the Medical Officer of Health divides his district into localities, giving the number of deaths occurring in each, but without giving the populations of these sub-divisions, which makes it impossible to calculate the death rates.

SPECIAL REPORTS.

It does not appear to be generally understood that in every case in which a Medical Officer of Health sends a special report to the Local Government Board, a copy of this should simultaneously be sent to the county council.

The General Order of the Local Government Board, 1891, which defines the duties of Medical Officers of Health includes the following Articles:—

“(15) He shall give immediate information to Us of any outbreak of dangerous epidemic disease within the District, and shall transmit to Us a copy of each annual report and of any special report. He shall make a special report to Us of the grounds of any advice which he may give to the Sanitary Authority with a view to their requiring the closure of any school or schools, in pursuance of the Code of Regulations approved by the Education Department and for the time being in force.”

“(16) *At the same time that he gives information to Us of an outbreak of infectious disease or transmits to Us a copy of his annual report, he shall give the like information or transmit a copy of such report to the County Council of the County within which his District may be situated.*”

By a later memorandum, dated July, 1897, the Local Government Board further directs as follows:—

“(13) Reports to sanitary authorities, advising the closure of a school or schools in any district are to be treated as ‘special’ reports within the meaning of the general order of the Local Government Board of March 23rd, 1891, and copies of them are required by Art. 18 (secs. 15 and 16) of that order, to be sent to the Board and to the County Council. These reports should state the grounds upon which the Medical Officer of Health advocates the closure of the school or schools in preference to the exclusion of particular scholars.”

“(14) All notices of the Sanitary Authority for the closing of Public Elementary Schools should be addressed, in writing, to the managers, and should state the grounds upon which the closing is deemed necessary.”

“All such notices shall specify a definite time during which the school is to remain closed. This should be as short a period as can be regarded as sufficing on sanitary grounds, since a second notice may be given before the expiration of the first, if it should be found necessary to postpone the re-opening of a school. The managers of schools, after complying with the requirements of the Sanitary Authority, have the right of appeal to the Education Department, if they consider any notice to be unreasonable.”

ADOPTIVE ACTS.

The adoptive Acts are:—The Infectious Diseases Notification Act, 1889; the Infectious Diseases Prevention Act, 1890; the Public Health Amendment Act, 1890.

One or more of these Acts are in operation in the majority of sanitary districts, but in some, none have been adopted.

The Infectious Diseases Notification Act, at the end of 1896, was in operation in 27 out of 34 sanitary districts. Those in which it was not in force were the following :—

Urban Districts.					Population.
Amble	...	...	...	...	4,500
Bedlingtonshire	...	...	...	...	18,000
Cramlington	...	...	...	...	6,100
Newbiggin-by-the-Sea	...	...	...	...	2,367
Rothbury	...	...	...	...	1,300
Seghill	...	...	...	...	2,300
					<hr/>
					34,567
Rural District.					
Rothbury	...	...	...	...	4,880
					<hr/>
					39,447
					<hr/>

Thus, out of the whole population of 349,581, the advantages of this most valuable Act were denied to nearly 40,000 people.

It is the duty of the Medical Officer of Health, on receiving information of the outbreak of any contagious, infectious, or epidemic disease of a dangerous character within his district, to visit the spot without delay, and inquire into the causes and circumstances of such outbreak, and in case he is not satisfied that all due precautions are being taken, to advise the persons competent to act, as to the measures which may appear to him to be required to prevent the extension of the disease, and also to take such steps as he is legally authorized to adopt under any statute in force in the district, or by resolution of the sanitary authority. This being the case it is manifestly of the greatest importance that the Medical Officer of Health should receive information of any case of contagious, infectious, or epidemic disease of a dangerous character at the earliest possible date.

Under the Infectious Diseases Notification Act, “every medical practitioner attending on, or called in to visit the patient, shall, forthwith, on becoming aware that the patient is suffering from an infectious disease to which this Act applies, send to the Medical Officer of Health for the district a certificate stating the name of the patient, the situation of the building, and the infectious disease from which, in the opinion of such medical practitioner, the patient is suffering,” and, under the same Act, “the head of the family to which such . . . patient belongs, and in his default, the nearest relatives of the patient present . . . and in default of such relatives every person in charge of, or in attendance on, the patient, and in default of any such person, the occupier of the building shall, as soon as he becomes aware that the patient is suffering from an infectious disease to which this Act applies, send notice thereof to the Medical Officer of Health for the district.”

So that, whether any medical practitioner is in attendance or not, the Medical Officer of Health at once receives information (the Infectious Diseases Notification Act being in force) of any outbreak of infectious disease to which the Act applies within his district, and the parents or persons in charge of the patient receive the necessary directions as to school attendance, isolation, etc.

Without the assistance of compulsory notification he cannot, except indirectly, become possessed of this knowledge. Many mild cases of infectious disease, notably measles, scarlet fever (frequently mistaken for measles), and even diphtheria, are treated (or maltreated) by the parents, without any medical man being called in, and children, frequently themselves in an infectious condition, from this infected house, are allowed to go to and from school, and thus spread the disease amongst those with whom they are in such close contact during school hours.

The Infectious Diseases Prevention Act, 1890, may be adopted either as regards all or as regards any of its sections by any extra metropolitan sanitary authority. It gives powers to deal in a more satisfactory manner with the disinfection of infected houses and clothing, and to provide temporary shelter for families who have to vacate their houses in order that disinfection may be properly carried out; with milk supplies liable to spread infectious disease; with prompt interment of the bodies of persons having died from infectious disease; with detention in hospital of persons who, suffering from an infectious disease and inmates of a hospital, would upon leaving be without the accommodation necessary to prevent the spread of infection; and it forbids the throwing of infected rubbish, etc., into any receptacle for refuse, without previous disinfection.

The Public Health Amendment Act, 1890, may be adopted by urban authorities in part or in whole; and by rural authorities, with the exception of those powers which are limited to urban authorities. It forbids the erection of buildings for human habitation on polluted sites. It gives amended powers as regards bye-laws with reference to the building of houses, the paving of yards, the regulation of water-closets and other conveniences, the removal of offensive matter during certain hours, etc., the preparation or exposure for sale as human food of unwholesome, unsound, etc., articles, unfit for human consumption, the pollution of watercourses, the notification of infectious diseases, the registration and regulation of common lodging-houses, etc.

THE COUNTY AS A WHOLE.

The number of urban districts at the end of 1896 was 22, the new district of Ashington, consisting of parts of the townships or civil parishes of Ashington and Sheepwash and Bothal Demesne and the whole of the township of Hirst, having been formed out of the rural district of Morpeth; and the new urban district of Rothbury created out of the Rothbury rural district.

The number of rural districts remains the same as in 1875, viz., 12.

The area of the urban districts has thus been increased to the extent of 3,714 acres, and the area of the rural districts proportionately diminished.

The population of the former has been increased by 10,300, and that of the latter similarly diminished.

Dr. Alexander Blair was appointed Medical Officer of Health to the urban district of Ashington, and Dr. Barrow to the urban district of Rothbury.

AREA.

The area of the county is 1,262,505 acres.

POPULATION.

The population of Northumberland (exclusive of Newcastle-upon-Tyne) estimated to the middle of 1896 is 349,581, being an increase of 29,081 over the 1891 census, and an increase of 8,421 above the population estimated to the middle of 1895.

The county, up to the end of 1896, was divided for the purpose of sanitary administration into 34 districts, as compared with 32 at the end of 1895, the increase being caused by the formation of the urban district of Ashington from a portion of the Morpeth Rural Sanitary District and the urban district of Rothbury from a portion of the Rothbury Rural District. Twenty-two districts are urban, with an estimated population of 216,802, and 12 are rural with an estimated population of 132,779.

The average number of persons per acre is, for the county, 0·27; for the urban districts, 4·01; and for the rural districts, 0·10.

This, however, is subject to great variation, thus:—In the urban district of Willington Quay the average population per acre is 23·95, while in the urban

district of Rothbury it is only 1·37. In the rural districts, the highest average is that of Tynemouth No. 2, 1·51, and the lowest that of Rothbury, which is 0·03.

The area and estimated population of each sanitary district in the administrative county will be found in a table at the end of this summary.

URBAN DISTRICTS.

Alnwick, Amble, Ashington, Bedlingtonshire, Benwell and Fenham, Berwick-upon-Tweed, Blyth South, Cowpen, Cramlington, Gosforth, Hexham, Morpeth, Newbiggin-by-the-Sea, Newburn, Rothbury, Seghill, Tynemouth, Walker, Wallsend, Weetslade, Whitley and Monkseaton, and Willington Quay, with an aggregate population, according to the census of 1891 of 182,267, and by estimation to the middle of 1896 of 216,802.

RURAL DISTRICTS.

Alnwick, Belford, Bellingham, Castle Ward, Glendale, Haltwhistle, Hexham, Morpeth, Norham and Islandshire, Rothbury, Tynemouth No. 1, and Tynemouth No. 2, with an aggregate population in 1891 of 137,233 and an estimated population to the middle of 1896 of 132,779.

BYE-LAWS.

According to the most recently published report of the Local Government Board, the following districts have bye-laws, viz.:—

Urban—Alnwick, Amble, Bedlingtonshire, Benwell and Fenham, Berwick-upon-Tweed, Cowpen, Gosforth, Hexham, Morpeth, Newburn, Tynemouth, Walker, Wallsend, Whitley and Monkseaton and Willington Quay.

Rural.—Alnwick, Belford, Castle Ward, Haltwhistle, Norham and Islandshire, Rothbury, Tynemouth No. 1 and Tynemouth No. 2.

Of the urban districts, Ashington, Blyth South, Cramlington, Newbiggin-by-the-Sea, Rothbury, Seghill, and Weetslade have no bye-laws; but with regard to Blyth South and Newbiggin-by-the-Sea they are in course of preparation.

Of the rural districts, Bellingham, Glendale, Hexham, and Morpeth are without bye-laws, but in each case they are either in course of preparation, or under consideration by the Local Government Board.

BYE-LAWS CONFIRMED BY THE LOCAL GOVERNMENT BOARD DURING THE YEAR.

Tynemouth Urban District Council (Borough).	Regulation of public walks or pleasure grounds, and removal therefrom of any person infringing a bye-law, by any officer of the urban authority or constable.
Northumberland County Council.	Regulating width and construction of wheels of waggons, wains, carts, or carriages, and use of skids.
Northumberland County Council.	Regulating the hours during which locomotives are not to pass over turnpike roads or highways; preventing the use of locomotives upon certain bridges.
Northumberland County Council.	Granting annual licenses to locomotives, and determining the fee to be paid in respect of each license.

REGULATIONS UNDER THE DAIRIES, COW SHEDS, AND MILK SHOPS ORDER,
1885, AND CONTAGIOUS DISEASES ANIMALS ACT, 1886.

The Dairies, Cow Sheds, and Milk Shops Order applies to all sanitary authorities, whether urban or rural, but under section 13 any sanitary authority may make regulations, having the force of bye-laws, relating to the inspection of cattle in dairies; for regulating the ventilation, lighting, cleansing, drainage and water supply of dairies and cow sheds; for securing the cleanliness of milk stores, milk shops and milk vessels; and for prescribing precautions to be taken against infection and contamination. A copy of every such regulation must be sent to the Local Government Board by the sanitary authority at least a month before the date named upon which it comes into force, and must also be published in a newspaper circulating in the district.

Every sanitary authority must keep a register in which to enter the names of every person carrying on the trade of cowkeeper, dairyman, or purveyor of milk, and must give public notice from time to time of registration being required, and of the mode of registration. It is unlawful to commence to occupy any building as a cow shed, dairy, or milk shop without (1) giving a month's notice, in writing, to the sanitary authority, and (2) until provision is made to the reasonable satisfaction of the sanitary authority for the lighting, ventilation, air space, cleansing, drainage, and water supply.

The condition of cow sheds and dairies does not receive that amount of consideration in the county which so important a subject requires. In most instances they are registered, but as generally no regulations under the Dairies, Cow Sheds, and Milk Shops Order have been made, it is left to the discretion of the sanitary inspector as to whether buildings are or *are not* in a satisfactory condition for the keeping of milch cows and the storage of milk. No standard having been adopted as to air space, ventilation, and light, and no regulations having been made as to the flooring, drainage, and water supply, the inspector is frequently in a difficult position. He recognises the unsatisfactory condition of the buildings, water supply, drainage, etc., but in the absence of regulations he is frequently induced to pass over many most insanitary buildings because of the difficulty, in the absence of bye-laws, of getting a conviction.

It is difficult to understand why so many district councils incur so grave a responsibility by neglecting to adopt regulations under this order. They involve no expense, and have the force of bye-laws. All sanitary authorities that adopt regulations can ensure the proper construction and maintenance of every cowshed, dairy, and milkshop, in the same manner, and with as beneficial results, as they can compel the rational building of houses under their respective building bye-laws. The lamentable and dangerous results of failing to adopt regulations under this order can be seen in almost every district, the miserable hovels in which some milch cows are housed, without any light, ventilation, drainage, or proper flooring, and in many cases without any water supply of decent purity.

Two facts are perhaps not generally known amongst cowkeepers, (1) That 25 per cent. at least of all milch cows (and in the case of stall-fed animals a much higher percentage) are tuberculous; (2) that the conditions most likely to develop this disease, to which cattle are so prone, are overcrowding (insufficient air space) and the absence of those other sanitary arrangements—ventilation, light, cleanliness, and an abundant supply of pure water—which so greatly conduce to a healthy condition of the animal.

Tuberculosis in cattle may be present for a considerable time without the animal presenting any marked symptoms; and, consequently, the milk from such animals (which causes tuberculosis in guinea pigs, etc., fed upon it) may be consumed by human beings for a long period, and in all probability, is the cause of many deaths in early life certified as of a tuberculous nature.

A means of ascertaining whether the cattle are suffering from tuberculosis has been introduced, and is known as the Tuberculin Test. At the present

time, this is not in every case absolutely reliable, for, while on the one hand all animals which re-act to this test are found on being slaughtered to be tuberculous, a few fail to re-act though affected with this disease. Still the test, though not absolutely certain in every case, is one of very great value, and the percentage of failures is so small, that if it were adopted, and all animals re-acting were slaughtered, tuberculosis might eventually be stamped out among cattle.

Cattle buyers, and especially cattle breeders, are beginning to realise this, and I know of more than one large cow shed, in which all the cows have been subjected to the Tuberculin Test, and all those which re-acted have been at once eliminated.

If this system were invariably followed, so as to reduce to a minimum the risk of fresh infection, and provided also that byres were so constructed as regards air space, light, ventilation, drainage, etc., as to no longer tend to the development of tuberculosis in animals occupying them, the gain to cattle owners in a short time would be very great, while the gain to consumers of milk, by eliminating tuberculosis from the milk supply, would be beyond all calculation. When farmers and other stock keepers realise that tuberculosis is essentially an infectious disease, conveyed through the milk and dried expectoration, whether the udders are affected or not; that ill-ventilated, overcrowded, and, in other ways, badly constructed byres produce that condition in cattle most favourable to the development and spread of this disease; and that in the Tuberculin Test they have a means of ascertaining, not at present with absolute certainty in every case, but in the vast majority of cases, whether tuberculosis is present in their herd or not, then much will have been accomplished towards stamping out bovine tuberculosis.

There are in the county many instances of cow sheds being as well constructed, and kept in as cleanly a condition as a perfectly regulated horse stable; but, unfortunately, both for the cow and the consumer of milk, there are more in which the cows are huddled together in *absolutely* dark, unventilated, and overcrowded byres, with floors uneven and saturated with manure and urine, with no provision for drainage, and no attempt at cleanliness. There are also instances of milk being stored in dark and unventilated cupboards, in dairies opening on to a fold yard, or with a privy ashpit in close proximity, and even in rooms used for the keeping and cleaning of harness, or as sleeping apartments. Were each district council to adopt regulations under sec. 13 of the Dairies, Cow Sheds, and Milk Shops Order, 1885, such as those suggested by the Local Government Board, all cow sheds and dairies would have to come up to a regulation standard, to the great advantage of the consumer, the cowkeeper, and the cow.

MILK.

With the exception of the large towns, which receive a considerable quantity of milk by rail, the supply is, for the most part, from local milk sellers, in some cases delivered by carts, but in the majority of the rural districts fetched from the cowkeepers by the consumers.

The condition of cow sheds, dairies, and milk shops is a matter of the greatest importance; for milk is used as an article of food in nearly every household. It ought to be the sole nourishment of infants, and it should enter largely into the food of children and invalids. It is liable to be highly injurious from various unhealthy conditions existing in the cow, such as tuberculosis, foot and mouth disease, splenic fever, etc. It is also peculiarly liable to absorb offensive gases, sewer and other vapours from uncleanly surroundings, and to transmit various infectious diseases peculiar to man, such as typhus, cholera, tubercular disease, pneumonia, diphtheria, scarlatina, enteric fever. Micro-organisms gaining access to milk, whether from a diseased cow, from the hands or clothing of the milker, from polluted water used for rinsing the milk vessels, or diluting the milk, or from particles of dung, find in it a most suitable medium for rapid multiplication.

FOOD AND DRUGS ACT, 1875.

RETURN of persons proceeded against under the above Act during the year 1896.

ate.	Name and quantity of article purchased	Name and Address of Vendor.	Result of Analysis.	Name and Date of Petty Sessions.	Fine.	Costs.	Remarks.
March 7	Butter $\frac{3}{4}$ lb.	Ralph Hall, Hexham, grocer	3·31 per cent. of water	Hexham, 21st April, 1896	£ s. d.	£ s. d.	Case dismissed.
Sept. 16	Whisky 1 pint	Margt. Riccarton, Old Hartley, innkeeper	28·3 per cent. underproof	Tynemouth, 12th Oct., 1896	1 0 0	1 0 6	
„ 16	Gin 1 pint	William Harper, Seaton Delaval, innkeeper	36·6 per cent. underproof	Tynemouth, 12th Oct., 1896	0 10 0	1 0 6	
„ 16	Whisky 1 pint	Martha Gillis, Seaton Burn, innkeeper	27·5 per cent. underproof	Moot Hall, 24th Oct., 1896	0 10 0	1 2 6	
„ 17	Whisky 1 pint	Hannah Myers, Amble, innkeeper	43·3 per cent. underproof	Alnwick, 17th Oct., 1896	1 0 0	1 1 10	Case dismissed.
„ 21	Gin 1 pint	Ellen Bulman, Allendale, innkeeper	51·9 per cent. of water	Hexham, 20th Oct., 1896	.....	.....
„ 23	Whisky 1 pint	J. L. Dixon, Longframlington, innkeeper	39 per cent. underproof	Rothbury, 14th Nov., 1896	0 10 0	1 2 6	
„ 23	Gin 1 pint	J. L. Dixon, Longframlington, innkeeper	50·1 per cent. underproof	Rothbury, 14th Nov., 1896	0 10 0	1 2 6	
„ 25	Whisky 1 pint	George Forsyth, Morpeth, innkeeper	30 per cent. underproof	Morpeth Ward, 4th Nov., 1896	0 10 0	0 19 0	
Dec. 11	Milk $1\frac{1}{2}$ pints	Robert Young, Wooler	20·7 per cent. of added water	Wooler, 5th Jan., 1897	0 7 0	1 2 0	
„ 15	Milk $1\frac{1}{2}$ pints	Philip Waugh, Stakeford Lane, cowkeeper	19 per cent. of added water	Blyth, 11th Jan., 1897	1 0 0	1 2 6	
Totals ...					£5 17 0	£9 13 10	

FOOD AND DRUGS ACT.

SUMMARY of samples analysed and results.

Sample.	Examined.	Adulterated.	Prosecutions.	Convictions.	Amount of Fine and Costs.
Return for the quarter ended 31st March, 1896.					
Butter ...	36	1	*1	...	£ s. d. ...
Return for the quarter ended 30th June, 1896.					
Olive oil ...	18	...	...	...	...
Port wine ...	18	...	...	...	...
Quinine ...	17	...	...	...	...
Return for the quarter ended 30th September, 1896.					
Milk ...	18	†1	...	...	...
Gin ...	18	3	3	2	3 3 0
Whisky ...	18	5	5	5	8 16 4
Return for the quarter ended 30th December, 1896.					
Milk ...	17	2	2	2	3 11 6
Corn-flour ...	18	...	...	...	...
Brandy ...	18	...	...	...	...
Butter ...	1	...	...	...	...
Totals ...	197	12	11	9	£15 10 10

* Case dismissed.

† Cautioned—adulteration being small.

Loans for sanitary and other public improvements applied for by Urban District Councils, were sanctioned by the Local Government Board to the amount of £25,811, the details of which are given below.

Authority.	Purpose.	Amount.	Period for redemption.
		£	
Alnwick Urban District Council	Fire engine & appliances	200	10
Do. ...	Slaughterhouses ...	450	30
Do. ...	Street improvement ...	846	20
Amble Urban District Council	Water Supply ...	6600	30
Berwick-upon-Tweed Urban District Council (Borough)	Water supply ...	3500	30
Do. ...	Do. ...	750	10
Cowpen Urban District Council	Public lighting...	385	5
Do. ...	Street improvement ...	450	7
Gosforth Urban District Council	Private street improvement	4905	5
Morpeth Urban District Council (Borough)	Water supply ...	2000	30
Norham Urban District Council	Sewerage and sewage disposal	830	30
Do. ...	Sewerage ...	165	30
Walker Urban District Council	Private street improvement	2430	5
Whitley and Monkseaton Urban District Council	Private street improvement	1000	6
Willington Quay Urban District Council	Sewerage ...	1300	30
		£ 25811	

LOANS SANCTIONED TO RURAL DISTRICT COUNCILS.

District.	Purpose.	Amount.	Years for redemption.
		£	
Alnwick ...	Water supply for the parish of Embleton	25	2
Bellingham ...	Water supply for Wark.	740	39
Rothbury ...	Interments ...	1375	30
		£ 2140	

BIRTHS.

The births registered during 1896 numbered 11,101, giving a birth rate of 31·75, which is 0·84 lower than that of 1895, when the birth rate was 32·59.

Of the 11,101 births 7,506 occurred in the urban districts, and 3,595 in the rural districts. The birth rate for the former was 34·62, as compared with 34·98 in 1895, and for the latter 27·07, as compared with 29·18 in 1895.

The birth rate for England and Wales also shows a lower rate than in 1895.

The following table shows the comparative rates :—

	Birth Rate.	Increase since 1895.	Decrease since 1895.
Administrative County... ..	31·75	—	0·84
Urban Districts	34·62	—	0·36
Rural „	27·07	—	2·11
England and Wales	29·70	—	0·65

The three highest birth rates for each 1,000 living in each class of districts were found to be as follows :—

Urban District.	Birth Rate.	Rural District.	Birth Rate.
Cowpen	50·57	Tynemouth No. 1	32·33
Blyth (South)	47·51	Tynemouth No. 2	30·29
Bedlingtonshire	45·77	Haltwhistle	28·76

while the three lowest in each class were recorded in

Urban District.	Birth Rate.	Rural District.	Birth Rate.
Whitley and Monkseaton	16·44	Bellingham	21·16
Rothbury	18·46	Glendale	22·94
Alnwick	24·51	Norham and Islandshire...	24·18

DEATHS.

The number of deaths registered in 1896 was 5,550 of which 3,696 took place in urban, and 1,854 in rural districts.

The county death rate was 15·87 as compared with 18·72 in 1895.

That of the urban districts was 17·04, as compared with 20·28 in 1895, and the rural death rate was 13·96 as against 16·49 in 1895.

The death rate for England and Wales was 17·10 as compared with 18·70 in in the previous year.

The approximate urban death rate for England and Wales was 17·92, and the approximate rural death rate 15·30.

The following table shows the comparative rates :—

Districts.	Death Rate.	Increase since 1895.	Decrease since 1895.
Administrative County	15·87	—	2·85
Urban Districts	17·04	—	3·24
Rural	13·96	—	2·53
England and Wales	17·10	—	2·60

The death rate of England and Wales shows a decrease of 2·60 as compared with the rate of 1895, and is 1·30 below the mean rate in the ten years 1886-95.

The three highest death rates in each class of districts were found to be as follows, for each 1,000 living :—

Urban District.	Death Rate.	Rural District.	Death Rate.
Cowpen	22·67	Rothbury	16·87
Morpeth	21·79	Bellingham	16·33
Blyth (South)	21·11	Belford	15·25

while the three lowest were recorded as under :—

Urban District.	Death Rate.	Rural District.	Death Rate.
Whitley and Monkseaton	8·82	Glendale	11·81
Newbiggin-by-the-Sea ...	10·98	Castle Ward	11·90
Rothbury	11·54	Morpeth	13·27

INFANT MORTALITY (UNDER 1 YEAR).

The number of deaths of children under a year old was, in the Urban districts 1,103, and in the Rural 415—total, 1,518.

The appallingly high death-rate which obtains at this age period all over the county is, to a great extent, preventible. Culpable neglect is, doubtless, responsible for a large number of these deaths, and total ignorance of the first principles of the proper clothing and feeding of infants accounts for, perhaps, a still larger proportion. Such ignorance will, no doubt, continue until education of the younger members of the community in some of the laws of health is made compulsory in our Board and other Schools. Popular lectures given under the auspices of the Technical Education Committees of County Councils on the hygiene of the house and its surroundings, and on the clothing, feeding, and nursing of children, in health and disease, and kindred subjects, might surely be made as interesting, and be as well attended as those dealing with other but not more important subjects.

The following table shows the comparative rates of infant mortality (deaths under 1 year, per 1,000 births) :—

	No. of Deaths.	Death rate per 1,000 Births.	Decrease since 1895.	Increase since 1895.	Mean Infant Mortality England and Wales, 1886 to 1895, both inclusive.
Administrative County	1,518	136·74	19·54	—	—
Urban Districts ...	1,103	146·94	18·72	—	—
Rural do. ...	415	115·43	24·77	—	—
England and Wales...	135,487	148·00	13·00	—	—
Do. do. ...	—	—	—	—	148

In 5 of the urban districts the infant mortality rate was higher, and in 15 lower than in 1895; while in 2 of the rural districts it was higher, and in 8 lower than during 1895. Two of the rural districts, viz., Rothbury and Tynemouth No. 2 present the same figures as in 1895.

The urban districts of Ashington and Rothbury were not formed in 1895, therefore, no comparison can be made.

DEATHS UNDER 5 YEARS.

The deaths under 5 years numbered 2,122, giving a death rate at this age period of 6·07 per 1,000 living as compared with 7·39 in 1895.

The immediate causes were chiefly measles, scarlatina, diphtheria, membranous croup, whooping cough, diarrhoea, and diseases of the respiratory organs, whilst the predisposing causes were, especially in the cases of diarrhoea and respiratory diseases, injudicious feeding, insufficient clothing, exposure to cold and wet (all from ignorance and neglect).

The following tables show the numbers and rates for the three years 1894-96 :—

1894.				
Urban.	Rural.	Total.	Death Rate.	
1,254	752	2,006	5·88	
1895.				
Urban.	Rural.	Total.	Death Rate.	Death Rate Increase.
1,746	778	2,524	7·39	1·51
1896.				
Urban.	Rural.	Total.	Death Rate.	Death Rate Decrease since 1895.
1,540	582	2,122	6·07	1·32

DEATHS AT 65 YEARS AND UPWARDS.

The number of deaths at this age period was 1,169, giving a death rate of 3·34 per 1,000 living.

Of these deaths 644 took place in the urban districts and 525 in the rural districts.

The following table shows the figures for the three years 1894-1896 inclusive :—

1894.			
Urban.	Rural.	Total.	Death Rate.
706	534	1,240	3·63

1895.							
Urban.	Rural.	Total.	Death Rate.	Death Rate Increase.			
805	647	1,452	4.25	0.62			
1896.							
Urban.	Rural.	Total.	Death Rate.	Death Rate Decrease since 1894.	Death Rate Increase since 1894.	Death Rate Decrease since 1895.	Death Rate Increase since 1895.
644	525	1,169	3.34	0.29	—	0.91	—

ZYMOTIC DISEASES.

510 deaths occurred from the seven principal zymotic diseases, being a decrease of 273 as compared with the number registered in 1895. Of these deaths 369 took place in the urban, and 141 in the rural districts.

The zymotic diseases which caused the greatest mortality were:—

Diarrhœa	...	...	...	120
Measles	...	...	...	95
Whooping Cough	...	...	...	95

The same three diseases caused the greatest mortality in their class in 1893, 1894, and 1895, as the following table shows:—

Name of Disease.				Numbers in 1893.	Numbers in 1894.	Numbers in 1895.
Diarrhœa				363	115	250
Measles				109	87	139
Whooping Cough				72	88	113

As these three diseases are not generally notifiable, I can give no information as to the number of cases which have occurred.

The following table shows where the zymotic death rate was highest in the two classes of districts, viz.:—

Urban District.				Death Rate.	Rural District.				Death Rate.
Weetslade				4.40	Tynemouth No. 2				2.31
Cowpen				4.07	Tynemouth No. 1				1.67
Walker				3.76	Haltwhistle				1.12

And the three lowest were as shown by the next table:—

Urban District.				Death Rate.	Rural District.				Death Rate.
Amble				Nil.	Glendale				0.29
Seghill				Nil.	Norham and Islandshire				0.47
Whitley and Monkseaton				0.40	Castle Ward				0.52

The comparative rates are set out in the following Table :—

	Death Rate.	Decrease since 1895.	Increase since 1895.
Administrative County	1·46	0·83	—
Urban Districts	1·70	1·14	—
Rural „	1·06	0·44	—
England and Wales	2·18	—	0·05

In 1896 the zymotic death rate showed an increase, as compared with 1895, in 8 districts ; there was a decrease in 23 districts, while in one it remained the same.

District.	1895.	1896.	Decrease.	Increase.
URBAN.				
Alnwick	6·87	0·60	6·27	—
Amble	3·00	Nil.	3·00	—
Ashington... ..	—	1·44	—	—
§Bedlingtonshire	3·61	2·00	1·61	—
Benwell and Fenham	1·62	1·71	—	0·09
Berwick-on-Tweed	1·57	1·12	0·45	—
Blyth (South)	5·38	2·76	2·52	—
Cowpen	4·80	4·07	0·73	—
§Cramlington	4·42	3·44	0·98	—
Gosforth	0·92	0·92	—	—
Hexham	1·34	2·16	—	0·82
Morpeth	1·69	0·93	0·76	—
§Newbiggin-by-the-Sea	Nil.	0·84	—	0·84
Newburn	2·15	1·78	0·37	—
§Rothbury	—	0·77	—	—
§Seghill	1·74	Nil.	1·74	—
Tynemouth	2·40	0·90	1·50	—
Walker	5·46*	3·76†	1·70	—
Wallsend	1·64	1·20	0·44	—
Weetslade... ..	3·00	4·40	—	1·40
Whitley and Monkseaton,.	2·17	0·40	1·77	—
Willington Quay... ..	2·26	1·98	0·28	—
RURAL.				
Alnwick	2·46	1·06	1·40	—
Belford	1·63	1·03	0·60	—
Bellingham	0·32	0·66	—	0·33
Castle Ward	1·68	0·52	1·16	—
Glendale	0·59	0·29	0·30	—
Haltwhistle	0·50	1·12	—	0·62
Hexham	0·90	0·93	—	0·03
Morpeth	1·69	0·99	0·70	—
Norham and Islandshire... ..	0·63	0·47	0·16	—
§Rothbury	0·33	0·62	—	0·29
Tynemouth No. 1	2·48	1·67	0·81	—
Tynemouth No. 2	3·31	2·31	1·00	—

* 2·20 without including 40 deaths in hospital of persons from other districts.

† 2·08 without including 21 deaths in hospital of persons from other districts.

§ Notification Act not in force.

ZYMOTIC DISEASES.—(*Continued.*)

Table showing death rates for the three years ending 31st December, 1896 :—

	1894.	1895.	1896.	Decrease, 1895.	Increase, 1895.	Decrease, 1896.	Increase, 1896.
Smallpox	Nil.	Nil.	Nil.	—	—	—	—
Scarlatina	0·22	0·30	0·24	—	0·08	0·06	—
Diphtheria	0·18	0·14	0·18	0·04	—	—	0·04
Enteric Fever	0·22	0·35	0·21	—	0·13	0·14	—
Measles	0·26	0·40	0·27	—	0·14	0·13	—
Whooping Cough	0·26	0·33	0·27	—	0·07	0·06	—
Diarrhoea	0·34	0·73	0·34	—	0·39	0·39	—

ZYMOTIC DISEASES.—(*Continued.*)

Table of cases of zymotic diseases notified from each district :—

1 Name of District.	2 No. of cases notified.	3 Percentage of population attacked as notified.	4 Mortality rate for all zymotic diseases notified and unnotified.
URBAN.			
Alnwick... ..	21	0·31	0·60
Amble	—	—	Nil.
Ashington	24	0·26	1·44
*Bedlingtonshire (ascertained)... ..	44	0·24	2·00
Benwell & Fenham (measles notifiable)	182	1·73	1·71
Berwick-upon-Tweed	52	0·39	1·12
Blyth South	41	1·03	2·76
Cowpen	186	1·18	4·07
Cramlington	8	0·13	3·44
Gosforth	35	0·53	0·92
Hexham	594	9·90	2·16
Morpeth	31	0·57	0·93
*Newbiggin-by-the-Sea	—	—	0·84
Newburn	84	0·93	1·78
*Rothbury (ascertained)	6	0·46	0·77
*Seghill	—	—	Nil.
Tynemouth	219	0·43	0·90
Walker	67	0·53	3·76
Wallsend	60	0·40	1·20
Weetslade	34	0·68	4·40
Whitley and Monkseaton	17	0·34	0·40
Willington Quay	112	1·39	1·98
RURAL.			
Alnwick	131	1·07	1·06
Belford	20	0·41	1·03
Bellingham	58	0·96	0·66

1	2	3	4
Name of District.	No. of cases notified.	Percentage of population attacked as notified.	Mortality rate for all zymotic diseases notified and unnotified.
URBAN.			
Castle Ward	34	0·35	0·52
Glendale... ..	17	0·16	0·29
Haltwhistle	20	0·25	1·12
Hexham... ..	148	0·53	0·93
Morpeth... ..	25	0·16	0·99
Norham and Islandshire	25	0·39	0·47
*Rothbury (ascertained)	6	0·25	0·62
Tynemouth No. 1	161	1·35	1·67
Tynemouth No. 2	202	1·26	2·31

* Notification Act not in force.

The zymotic diseases which are generally notifiable are smallpox, scarlatina, diphtheria, and the four fevers—typhus, enteric, continued, and relapsing—grouped together. As before noted, the three zymotic diseases which cause the largest number of *deaths* are diarrhoea, measles, and whooping cough, but their notification is not compulsory, therefore, it is impossible to make any reliable calculations as to the number of cases.

The calculations in columns 3 and 4 do not include 99 cases of measles notified from the district of Benwell and Fenham, nor 447 cases of measles, and 62 of whooping cough from the urban district of Hexham, because in other districts these diseases are not notifiable.

CHOLERA.

There were no cases reported during the year 1896.

SMALLPOX.

There were no deaths from smallpox during the year, and only five cases notified. All of them from the borough of Tynemouth. This is an increase of four upon the previous year.

The death rate from smallpox for England and Wales in 1896 was 0·62 per 1,000 living.

CHICKEN POX.

This disease was present in only a few districts.

SCARLATINA.

1,602 cases of scarlatina were notified during the year; 908 cases in urban, and 706 in rural districts, causing 84 deaths as compared with 104 in 1895, and 74 in 1894.

Of these 84 deaths, 64 took place in urban districts and 20 in rural.

The following table gives the comparative death rates from scarlatina :—

	Death Rate.	Decrease since 1895.	Increase since 1895.
Administrative County	0·24	0·06	—
Urban Districts	0·29	0·04	—
Rural „	0·15	0·11	—
England and Wales	0·18	—	0·03

Of the 510 deaths from zymotic diseases in the county 95 were due to measles, being nearly equal to one-fifth of the whole number of deaths from zymotic diseases.

The greatest number of cases occurred in the urban districts of Tynemouth (169), Cowpen (126), Willington Quay (100), Hexham (82), Newburn (63), Benwell and Fenham (55), Walker (55), Wallsend (52), and Blyth South (32).

In the rural districts the largest number of cases appeared in Tynemouth No. 2 (177), Tynemouth No. 1 (123), Hexham (122), Alnwick (121), and Bellingham (54).

In the urban districts of Amble, Newbiggin-by-the-Sea, Rothbury, and Seghill there were no cases.

MEASLES.

There were 95 deaths from measles, 73 of which occurred in urban districts, and 22 in rural.

The following table shows the comparative rates :—

			Death Rate.	Decrease since 1895.	Increase since 1895.
Administrative County	...	...	0·27	0·13	—
Urban Districts	...	...	0·33	0·33	—
Rural	„	...	0·16	—	0·13
England and Wales	...	...	0·56	—	0·19

In 1894, 1895, and 1896 the death rate from measles has averaged 0·31 per 1,000.

Measles is an especially fatal disease amongst children under five years of age, and more particularly between the ages of twelve months and two years. As is the case with most infectious diseases, the mortality from measles is greater in urban than in rural districts, and in colliery and other populations where overcrowding is common, and where there is frequent communication between the members of infected and non-infected houses, the mortality is greater than in purely agricultural villages.

But very slight (if any) precautions are usually taken to prevent the infection from spreading, it being a common, though erroneous belief, that all children are bound to have measles, and that the sooner they get it over the better. Considering the great mortality from this cause amongst children under five years of age, principally due to measles being so frequently complicated with bronchitis or pneumonia, it is evident that if the attack could be postponed until after the fifth year the mortality would be greatly reduced. The closure of infant schools is frequently a valuable help in cutting short an epidemic of this nature. The disease is infectious before the rash appears, and the children, if kept from school, *may* possibly play together in the open air of the streets; they *must*, if attending school, be shut up for hours in the same room, and inhale each other's breath. With a view to discovering the insanitary surroundings which so greatly increase the mortality from this disease the exclusion from school of children from infected houses or infected areas, and also to determining the question of school closure, before a widespread epidemic has occurred in any district, I have recommended the addition of measles to the list of notifiable diseases, with the suggestion, that arrangements should be made with medical practitioners, for only one case to be notified from any house during a month.

The recommendation to add measles to the list of notifiable diseases has frequently been negatived on the score of expense, but if the plan were adopted of limiting the number notified to one from each family in 28 days, the expense to the authority would not be serious, and the notification would, as well as doing good generally, tend to lessen the infection from scarlatina cases which are frequently mistaken by parents for measles. I have recently heard of this arrangement having been voluntarily adopted in more than one district, and that no difficulties were experienced in its working.

TYPHUS FEVER.

There were two deaths from typhus fever, both of which occurred in the rural district of Haltwhistle. This gives a death rate for the county of 0·006 per 1,000.

There was one death from typhus reported in 1895. This occurred in the rural district of Morpeth.

ENTERIC FEVER.

There were 76 deaths caused by enteric fever, as compared with 122 in 1895 and 73 in 1894. Of these deaths 57 occurred in the urban districts and 19 in the rural.

The following table gives the comparative death rates :—

	Death Rate.	Decrease since 1895.	Increase since 1895.
Administrative County ...	0·21	0·14	—
Urban Districts... ..	0·26	0·13	—
Rural „	0·14	0·16	—
England and Wales	*	—	*

* The Registrar General does not give the death rate for Enteric (or Typhoid) Fever singly.

There were 308 cases notified or ascertained during the year, 197 from urban districts and 111 from rural. The number of cases notified per 1,000 living was 0·88.

In the urban districts the greatest number of cases (35) occurred in the district of Cowpen, and the period of the year during which the cases were most numerous throughout the county, was the month of February.

Of the rural districts enteric fever was most prevalent in the Tynemouth No. 1 District (37).

DIPHTHERIA AND MEMBRANOUS CROUP.

There were 166 cases notified, 134 as diphtheria and 32 as membranous croup.

The diseases (one or both of them) were notified or ascertained from the following districts, viz.:—

Urban.—Ashington, Bedlingtonshire, Benwell and Fenham, Berwick, Blyth South, Cowpen, Cramlington, Gosforth, Hexham, Morpeth, Newburn, Tynemouth, Walker, Weetslade, Whitley and Monkseaton, and Willington Quay.

Rural.—Alnwick, Belford, Bellingham, Glendale, Haltwhistle, Hexham, Morpeth, Norham and Islandshire, Tynemouth No. 1, and Tynemouth No. 2.

Twenty-six districts as compared with 22 in 1895.

There were 35 deaths from diphtheria, and 28 from membranous croup. Of the former, 22 occurred in urban districts, and 13 in rural districts, and of the latter, 21 in urban districts, and 7 in rural.

The following table shows the comparative rates :—

	Death Rate.	Decrease since 1885.	Increase since 1895.
Administrative County... ..	0·18	—	0·04
Urban Districts... ..	0·19	—	0·06
Rural „	0·15	—	0·08
England and Wales	0·29	—	0·04

WHOOPIING COUGH.

There were 95 deaths from whooping cough, 60 of which took place in urban districts, and 35 in the rural. The number of deaths is exactly the same as those caused by measles.

The following table shows the comparative rates :—

	Death Rate.	Decrease since 1895.	Increase since 1895.
Administrative County	0·27	0·06	—
Urban Districts... ..	0·27	0·08	—
Rural „	0·26	—	0·04
England and Wales	0·41	—	0·11

PUERPERAL FEVER.

This disease caused 17 deaths in the county during the year, as compared with 16 in 1895—ten in urban and 7 in rural districts.

The following is a table of comparative rates :—

	Death Rate.	Decrease since 1895.	Increase since 1895.
Administrative County	0·05	—	0·01
Urban Districts... ..	0·05	—	—
Rural „	0·05	—	0·02
England and Wales	*	—	—

*The Registrar General gives no figures except for London.

ERYSIPELAS.

There were 12 deaths from this disease during the year, 6 in urban and 6 in rural districts.

The comparative rates will be seen by the following table :—

	Death Rate.	Decrease since 1895.	Increase since 1895.
Administrative County	0·03	—	0·01
Urban Districts... ..	0·03	—	0·01
Rural „	0·04	0·04	—
England and Wales	*	—	—

* The Registrar General does not deal with this disease separately.

Erysipelas is a disease greatly fostered by insanitary surroundings, and one to which wounded surfaces are peculiarly susceptible.

Pollution of the foundations of the houses or of the adjacent ground by badly constructed privy-ashpits, or by leaky drains, and the constant forcing of trapped gullies, placed close to the house door, or pantry window, and other insanitary surroundings, have frequently caused repeated attacks of erysipelas in the same family, as is shown by the disease failing to re-appear when these defects have been remedied.

DIARRHŒA.

The number of deaths was 120, as compared with 250 in 1895. Of these deaths, 90 occurred in urban districts and 30 in rural districts. During 1894 the number of deaths was 115, and in 1893 they numbered 363.

Decrease since 1895	...	...	...	130
Decrease „ 1893	...	...	...	243

The following table shows the comparative death rates:—

	Death Rate.	Decrease since 1895.	Increase since 1895.
Administrative County ...	0·34	0·39	—
Urban Districts ...	0·41	0·48	—
Rural „ ...	0·22	0·27	—
England and Wales ...	0·55	0·32	—

Diarrhœa when epidemic is generally associated with high temperature. When not epidemic it is usually due to improper food, and is especially frequent amongst children brought up by hand. As long as young children are brought up (!) upon food which it is impossible for them to digest, so long will diarrhœa, and other wasting diseases of children continue to claim their percentage of preventible deaths.

I wish here to repeat and emphasize my remarks on this subject in my last annual report, viz.:—“When parents learn that it is as impossible to rear “a young child properly upon ‘boiley,’ sour apples, etc., as it would be to “rear a young pig upon barley meal and Indian corn, diarrhœa among young “children will cease to cause the number of deaths under one year which it “now does. I still hope that the technical education committees of county “councils will see their way to impart valuable instruction by lectures on the “hygiene of the house, and the feeding and nursing of children in health and “disease. As in bee-keeping, so in the rearing of children, it is not expected “that the old hands will consent to adopt many new ideas; but as in the “former subject, technical education committees have induced the new race “of bee-keepers to relinquish the old methods of smothering the swarm in order “to secure the honey, so will they succeed with the new race of mothers in “imparting that knowledge of the necessities of infant life which will result “in a diminution of the death rate from improper feeding, etc.”

PHTHISIS.

There were 503 deaths from this disease in the administrative county, distributed as follows:—328 in the urban and 175 in the rural districts.

The number of deaths in 1895 was 555, of which 362 occurred in urban and 193 in rural districts.

The comparative rates are shown in the following table :—

	Death Rate.	Decrease since 1895.	Increase since 1895.
Administrative County ...	1·43	0·19	—
Urban Districts... ..	1·50	0·30	—
Rural Districts	1·31	0·06	—
England and Wales	*	—	—

* The Registrar General does not give the Phthisis death rate, except for London.

This disease is mainly spread by the expectoration from tuberculous patients, the milk of tuberculous cows, and the eating of tuberculous meat. Measures directed against the first of these must be in the direction of destroying the bacilli before the expectoration becomes dried and pulverised (as this condition so greatly favours the dissemination and inhalation of the organisms special to this disease). In hospitals, and in the case of patients confined to the house, it is easy to accomplish this, but amongst consumptives not confined to the house, infective sputum is constantly expectorated on to the floor of railway carriages and other public conveyances, becoming, when dried, a decided source of danger to the rest of the community. The great safeguard against the consumption of tuberculous meat is thorough systematic inspection by competent men of all meat exposed for sale, which is greatly facilitated by the erection of public abattoirs. As regards the danger from tuberculous milk, the measures adopted must be in the direction of stamping out tuberculosis from every herd of milch cows (see pages 6 and 7), and, in the case of the slightest suspicion attaching to any particular milk supply, the boiling of milk before use.

RESPIRATORY DISEASES.

There were 669 deaths from respiratory diseases in the administrative county during the year, 460 taking place in the urban districts and 209 in the rural.

The number of deaths in 1895 was 900, and the death rate for the county 2·63.

The following table shows the comparative rates :—

	Death Rate.	Decrease since 1895.	Increase since 1895.
Administrative County ...	1·92	0·71	—
Urban Districts... ..	2·12	0·59	—
Rural „	1·57	0·95	—
England and Wales	*	—	—

* The Registrar General gives the death rate for London only.

ISOLATION HOSPITALS.

The only sanitary districts mentioned in the reports as having hospital accommodation for the isolation of infectious diseases are the urban districts of Alnwick, Bedlingtonshire, Berwick-on-Tweed, Blyth (South), Cowpen, Cramlington, Tynemouth, Walker, Wallsend, and Willington Quay.

The only rural district having hospital accommodation is Belford.

I very much regret to be unable to state that any definite steps have been taken in the direction of providing isolation hospitals in this county, either for individual authorities or for combined districts. The amount of isolation hospital accommodation available is as follows:—Alnwick, 6 beds; Bedlingtonshire, 9 beds; Berwick-on-Tweed, 8 beds; Blyth (South) and Cowpen (Blyth Port Sanitary Authority Hospital), 18 beds; Cramlington, 12 beds; Tynemouth, 10 beds; Wallsend and Willington Quay, 21 beds; Belford, 6 beds—total, 90, for a population of 139,306. The hospital at Walker Gate belongs to the city of Newcastle.

The number of cases treated in these institutions during 1896 was 105, in the following districts, viz.:—Alnwick, 4; Bedlingtonshire, 1; Berwick-on-Tweed, 1; Blyth (South), 2; Tynemouth, 27; Walker, 5; Wallsend, 11; Willington Quay, 49; and Belford, 5.

It will be seen by the foregoing that the Willington Quay district sent more patients to hospital during 1896, than were sent by all the authorities together in 1895.

The medical officers of health have, in many cases year after year, pointed out to their sanitary authority the urgent need of such provision being made.

The objections advanced by sanitary authorities against providing means of isolating cases of dangerous infectious disease are, usually, two—first the expense of building, furnishing, and maintaining an institution which may not, by any means constantly, be in use; and, second, that the persons suffering from these infectious diseases would not make use of an isolation hospital if one were provided.

First, as to the expense of building and maintenance. If it be granted (which is, even in the present day, denied by some) that sewers, drains, and traps are necessary in all localities where any considerable number of houses are in close proximity to each other, in order to minimise the risk of injury to health from conditions which would otherwise constitute a nuisance, and that it is desirable to empty a privy ashpit at short intervals, though capable of holding a six months' accumulation, in order to avoid the possible evil results arising from large accumulations of putrifying animal and vegetable matter; how much more necessary is it, when disease has actually broken out, to be in a position to separate the infectious from the healthy, and so prevent the spread of disease from one member of a family to the others, and from one family to another, until it exists in an epidemic form. No one who has had any insight into the mode of living in closely populated districts (including collieries, at which there are hundreds of families with only one or two rooms each) and in houses let off in single rooms to separate families, with a door and staircase common to all, can possibly think, by the greatest stretch of imagination, that isolation of the infectious can under such circumstances be possible. Regarding the question from the standpoint of preventive medicine, it must be as absolutely necessary to provide and maintain the means protecting the community at large from these dangers, which may at any moment appear amongst us from within, as, from a military and naval point of view, it is desirable to maintain a huge army and navy, in order to isolate ourselves from foes which may any day assail us from without.

Secondly, as regards the disinclination of some persons to avail themselves of isolation hospitals, this has in a very marked degree ceased to exist. In the remote past there was a most unreasonable prejudice against becoming an in-patient in any of our general hospitals or infirmaries. The advantage, in certain cases, of so doing is now so universally recognised, that the applications for admission far exceed the number of beds available.

When isolation hospitals were first established, difficulty was experienced in persuading persons attacked by infectious disease to make use of them. In a vast majority of cases this difficulty does not now obtain. The public recognise the advantages of these institutions—air, light, warmth, quietude,

constant and efficient nursing, food properly chosen, and prepared, all of which are so important as regards the individual stricken down with illness, and also the immense benefit accruing to the other members of the family, and to the community at large, by removing a constant source of infection from the immediate vicinity of the healthy. These statements are borne out by reference to the following statistics.

In 1895 the number of zymotic diseases notified throughout the county was as follows :—

Small-pox	...	...	...	...	1
Scarlatina	...	...	...	...	1,638
Diphtheria	...	...	...	...	148
Fevers	...	...	...	...	596
Total	...	...	...	...	<u>2,383</u>

In that year the number of patients sent to hospital was 46, representing a percentage of 1·93 upon the cases notified.

While in 1896 the number of cases notified was 334 less than in 1895, being :—

Small-pox	...	...	...	...	5
Scarlatina	...	...	...	...	1,602
Diphtheria	...	...	...	...	134
Fevers	...	...	...	...	308
Total	...	...	...	...	<u>2,049</u>

The number of patients sent to hospital was, as before stated, 105, being a percentage of 5·12 upon the cases notified.

Though temporary (iron and wood) hospitals cannot be recommended as the most satisfactory buildings for the purpose of isolating cases of infectious disease, they have the advantage of being marvellously cheap, and the benefit they have conferred upon their inmates, and upon the community at large, at a very small cost, is incalculable. As examples of these I may instance the isolation hospitals for the borough of Tynemouth, Blyth Port Sanitary Authority, and the Berwick-on-Tweed Urban District.

HOUSING OF THE WORKING CLASSES.

Houses for the working classes have, during the past year, been built in various parts of the county, but, as I have before pointed out, there are many localities in which the supply falls far short of the demand. There are still great numbers of houses totally unfit for human habitation; badly constructed, the roofs neither water-proof nor wind-proof, the floors below the ground level outside, no damp course in the walls, no provision for through ventilation, absence of, or defective spouting, unprovided with privies, ashpits, or drainage, and in other ways insanitary. In the older houses of this description there is frequently an attic in the roof, open to the tiles, lighted only by one, or sometimes two panes of glass, not made to open. From the impossibility of using these rooms in winter, there is much overcrowding in the living room beneath, in which the cooking, and frequently the washing operations are carried on. The huddling together of a family of five or six, night and day, in a room fourteen feet square by seven to eight feet high, is undoubtedly prejudicial to the health of the inmates. In cases of illness it materially lessens the patient's chance of recovery or retards his convalescence, and if the illness be of an infectious nature, isolation is impossible. Moreover it must be subversive of all the decencies of everyday life, since there can be no proper separation of the sexes, and it leads, in many cases, to a great want of personal cleanliness.

There are thousands of huge privy ashpits sunk below the ground level, uncemented and uncovered, containing a three or four months' accumulation of putrid animal and vegetable matter, rain water, slop water, and frequently germs of infectious disease. The ground beneath and around is saturated with the products of decomposition, the air is polluted, and thereby a most lowering effect is produced upon the vitality of persons living in the immediate vicinity, and dry particles of these filth accumulations are frequently borne by the wind into the adjacent houses, and through the pantry windows on to the food.

Privy ashpits should rarely, if ever, be constructed. The communication between the two soon becomes blocked up, all the house refuse is thrown into the ashpit, as are also the ashes which ought to be used daily in the privy. Where ashpits and privies are built, there should be no communication between the two. The space under the seat should be well cemented in every part, easily accessible from a door behind or at the end, and the whole seat capable of being raised on hinges, so as to facilitate the sprinkling of dry ashes over every part of the space beneath. House refuse should be burned every day behind the kitchen fire, and any ashes not required for use in the privy, as indicated above, should be placed in a small tub, or properly cemented and covered ashpit, only large enough to hold one week's accumulation. If these suggestions were carried out, privies and ashpits would be entirely free from smell, and the adjacent ground and air would cease to be polluted by putrid and offensive matter.

SCAVENGING.

As in former years, scavenging is carried out for the most part by one of four methods—in urban districts by the district council, in rural districts by a contractor or by the neighbouring farmer, and in colliery districts usually by the colliery authorities. The first method alone is satisfactory. Removal by a contractor is sometimes properly carried out and sometimes very inefficiently. Collection of refuse by farmers is always unsatisfactory, since the removal is never carried out at regular or short intervals. Ashpits at collieries appear to be emptied somewhat more frequently than formerly but nearly all are uncovered and uncemented. They are generally below the ground line outside, and frequently contain considerable quantities of rain water, slop water, and soap suds. In dealing with house refuse, as with sewage, the object should be to dispose of it as quickly as possible, and in this way, and also by keeping it in as dry a condition as possible, to retard putrefaction.

POLLUTION OF RIVERS AND STREAMS.

A certain amount of progress has been made in the direction of freeing some of our rivers and streams from the existing and, in many cases, increasing pollution by sewage. At Alnwick, where for some years the sewage question has occupied the attention of the authorities, a scheme has been adopted, including precipitation tanks and land filtration, which will prevent river pollution, and tend towards the reduction of preventible diseases. At many of the places reported upon by me from time to time, and summarised in my special report, prepared under your instructions and presented to you in March last, works have been put in progress, and in some instances are completed, which will have the effect of considerably reducing the pollution of rivers and streams.

At Willington Gut, which had long been complained of as a very serious nuisance, much has been done. The Willington Quay District Council have, at a cost of nearly £,2000, constructed a new sewer, and have had all the sewers and drains under their jurisdiction connected with the same; while the Wallsend District Council have on their side of the Gut constructed a new sewer, but the drains from some of the houses on that side are not yet connected with the new sewer. The Gut is also still subject to pollution by the Tynemouth Rural Sanitary Authority from the Rosehill

sewer. At Morpeth the Town Council consented to an order by the Judge of the County Court, that from and after the 18th day of January, 1900, they should abstain from causing to fall or flow, or to be carried into the river Wansbeck, any solid or liquid sewage matter, contrary to the provisions of part II., section 3, of the Rivers Pollution Prevention Acts, 1876 and 1893, under a penalty of 25s. for every day during which there is default in compliance with the said order. At Rothbury the pollution of the Coquet by the deposit of solid rubbish has been abated, and a depôt provided for such deposit.

The following places also may be mentioned amongst others where improvements have been made, and works completed, with a view to preventing the pollution complained of :—Capheaton Hall, Belsay village, Thorneyford and East Lodge, Blagdon, Plessey Hall farm, North Eastern Reformatory, Matten, North, South and East Fenwick, Milburn, and Milburn Hall, The Highlander inn, Bellasis, Boghall, East Coldcoats, Cheeseburn Grange, Eachwick, Havannah farm, and the North Lodge (Close House estate), Clifton farm, Whorlton vicarage and Dene Houses (Ouseburn).

At Ponteland a comprehensive scheme for the disposal of the sewage has been adopted, and the works will in due course be carried out; also a scheme has been agreed to for sewage disposal at Stamfordham and Hawkwell.

WORK ACCOMPLISHED BY SANITARY INSPECTORS.

From some of the districts I have received information as to the above, but not to a such an extent, as to enable me to draw up, as I had hoped, a tabulated statement dealing in this respect with each sanitary district. As I have before stated, considering the many able and energetic officers appointed throughout the county, some holding special certificates, and devoting the whole of their time to the duties connected with their appointments, I think it is a distinct loss that the work accomplished by them should not be placed on record.

I have again to thank all the medical officers of health for the information and assistance they have at all times so kindly placed at my disposal, and the different surveyors and inspectors, whose local knowledge has so frequently been of material help.

I am, Gentlemen,

Your obedient servant,

J. W. HEMBROUGH.

THE SANITARY DISTRICTS IN THE COUNTY.

PORT SANITARY AUTHORITIES.

TYNE PORT.

Medical Officer of Health—WILLIAM EDMUND HARKER, M.D.

During the year 12,348 vessels (British and foreign) were inspected, and the extra visits brought the total up to 13,118. The extra visits are classified as under:—

Extra visits paid	...	...	...	...	651
Visits to water boats	...	...	...	...	75
„ „ gangways	...	...	...	...	44

Of the total number of vessels inspected 10,608 were British and 1,740 foreign.

The sanitary condition was as follows:—

Good	...	...	...	...	...	11,383
Passable	...	...	...	...	...	204
Dirty condition	...	...	...	...	...	761

The total return of arrivals in the port during the year, as furnished by Mr. F. W. R. Staveley, collector of customs, was 14,127.

The number of vessels inspected has increased from 2,410 in the year 1879 to the figures given above, viz. : 12,348 during 1896.

The total number of the crews visited by the inspectors was	154,975
„ „ Passengers	30,963
„ „ Emigrants arriving in the Tyne	233
	<u>186,171</u>

The classification of vessels inspected is as follows:—

Vessels arriving coastwise	...	...	...	...	...	6,772
Fishing vessels „	...	...	...	...	...	1,332
Vessels arriving from foreign ports	...	...	...	...	...	4,244
						<u>12,348</u>

The special cargoes inspected are set forth in the following table.—

Description.	Rags.	Bones.	Onions.	Wheat.	Foreign Fish.	Potatoes	Fruit.	Total.
Number of Consignments examined.	85	1	5	120	932	28	72	1,243

During the year 27 patients were admitted to the hospital. The diseases from which they were suffering were given as:—

Scarlet fever, 5; smallpox, 4; pneumonia, 1 (suspected typhoid fever); influenza, 2 (one removed as suspected typhoid fever, and the other as smallpox); typhoid fever, 8; septic tonsilitis, 1 (suspected scarlet fever); choleraic diarrhoea, 1; diarrhoea, 1; malarial fever, 2; diphtheria, 1; and measles, 1.

The greatest care was taken to prevent the spread of disease by the inspection of vessels, their crews and passengers, and by disinfection.

The water boats employed on the river for furnishing ships with fresh water were carefully examined, and reported to be in a satisfactory condition.

BLYTH PORT.

Medical Officer of Health—JOHN CROMIE, L.R.C.P., L.R.C.S.

During the year 2,117 vessels arrived at the port of Blyth, representing a tonnage of 1,291, 642 tons, an increase of 56 vessels and 14,980 tons over the year 1895.

The ships are classified as follows:—

Class of ship.	Foreign.	Coastwise.	Totals.
British steam	361	586	947
„ sailing	3	84	87
Foreign steam	389	436	825
„ sailing	101	157	258
	854	1,263	2,117

Every one of the above vessels was, as soon as possible, after arrival visited by the inspector, Mr. Harris, and overhauled.

With respect to the British ships, the following defects in structural arrangements were found:—Defective port lights, sweating bulkheads, smoky forecastles, bad ventilation, and bad fore-castle flooring.

British steam	38
„ sailing	4
Total	42

Of the 42 vessels complained of 38 had the defects remedied before leaving, and in the cases of the remaining four notices were sent to the sanitary officers of the next British port of arrival; and in the cases of three of them notice has been received that the defects complained of have been remedied.

The following *Sanitary Defects*, i.e., dirty fore-castle, direct communication between water-closet and fore-castle, dirty bow and paint lockers, and dirty water-closets were found and pointed out.

British steam	133
„ sailing	7
Foreign steam	89
„ sailing... ..	33
Total	262

253 of these defects were remedied at once by the officers in charge. In the other nine cases the Medical Officer of Health visited the ships, and in eight cases the defects were remedied without delay, whilst in the last case a promise was given that the matter complained of would be put right at the next port, and the promise has been carried out.

With respect to the structural defects in foreign ships, the Medical Officer of Health reports that as he had no power of enforcing alterations, no record was kept.

There were three cases of typhoid fever reported during the year. The first, on January 25th, on board a Norwegian sailing ship. The man was at once removed to hospital. On examining the ship's papers, it was found that one of the crew suffering from typhoid had been removed to hospital in the port of London, and that the ship had been disinfected, her water supply emptied, and a fresh supply taken in. On January 27th, another of the crew was reported ill, and on being removed to hospital he developed typhoid fever. No other case occurred during the vessel's stay.

On May 23rd, the s.s. "Ophelia," arrived from Antwerp with one of the crew suffering from typhoid. He was removed to hospital and the ship was disinfected and fumigated thoroughly. The water tanks were pumped out and cleaned and a fresh supply taken.

No other cases of infectious disease were reported during the year.

The attention of the Medical Officer of Health was drawn to the water supply of five ships, and in each case the tanks were pumped out and a fresh supply taken.

The isolation hospital provided by this Authority has been of very material value during the year. By removing to hospital 3 cases of enteric fever, occurring amongst the crews of 2 vessels, it is probable that outbreaks of this disease on shore were prevented, and by isolating cases of the same disease, and also of scarlatina, from the Cowpen district, the spread of infection to other members of the family and to other families was prevented to an unknown extent. When a patient suffering from any infectious disease is removed to hospital, not only are his prospects of recovery materially increased, but he ceases to be a source of danger to all other members of his own family and to the whole community.

URBAN DISTRICTS.

ALNWICK.

Medical Officer of Health—G. F. EASTON, M.D.

Area, 4,777 acres ; Estimated population, 1896, 6,691 ; Birth rate, 24·51 ; *Death rate, 19·13 ; Zymotic death rate, 0·60 ; Infant mortality rate (per 1,000 births), 152·44 ; Phthisis death rate, 2·54 ; Death rate from respiratory diseases, 2·85.

The number of births was 164, giving a birth rate of 24·51, as compared with 31·98 in the year 1895.

The death rate is much lower than in 1895, being 19·13 as against 29·14 ; or, after deducting the deaths of persons in public institutions, and not belonging to the district, 16·74, as compared with 28·08.

The infant mortality rate is slightly lower, and the zymotic rate is more than 6 per 1,000 lower, being 0·60 as compared with 6·87 in 1895.

Improvements. The substitution of iron pipes for earthenware in Rugley Wood, giving a better flow of water.

The further distribution of hydrants through the town, bringing the number up to 168.

The satisfactory progress of the sewerage works.

The provision for a better escape of storm water and sewage from the higher parts of the town at Bow Alley, by the construction of a new 18-inch relief sewer.

The erection of an automatic flushing syphon in connection with the sewers on the Wagon Way, and the flushing of the pipes at intervals.

An increased number of seats in the outskirts of the district, for the accommodation of invalids and infirm people.

The construction of two new slaughter houses and a scalding house in connection therewith.

A large number of water-closets have been repaired, altered and improved drains repaired, re-laid, trapped, and tested; houses re-spouted, and old spouts repaired and cleaned out; back yards cemented, and many nuisances abated.

Requirements. Provision of suitable dwellings for the working classes.

Improvements in the narrow and cramped courts and lanes, where the working classes are principally living in ill-ventilated, damp and dilapidated houses; provision of a steam disinfecter at the isolation hospital; and an enlargement of the lodging-house accommodation.

AMBLE.

Medical Officer of Health—W. SMYTH, M.B.

Area, 2,025 acres; Estimated population, 1896, 4,500; Birth rate, 31·55; Death rate, 13·11; Zymotic death rate, nil; Infant mortality rate per 1,000 births, 133·80; Phthisis death rate, 2·00; Death rate from respiratory diseases, 1·77.

The birth rate is lower than in 1895, when it was 35·75. The death rate is 4·64 lower than in 1895, and the Medical Officer of Health states it is the lowest recorded since he was appointed. The zymotic death rate being nil, and the infant mortality rate 133·80, as against 174 per 1,000 births in 1895, seems to indicate not only that the district is more healthy generally, but also that greater care is being taken of young children.

Improvements. Completion of the new water scheme, and a supply of water which is both plentiful and good in quality.

Sewerage improvement in Queen Street, also behind the Waterloo Hotel, and the junction of the latter sewer with the Church Street sewer.

Requirements. Adoption of the Infectious Diseases Notification Act; provision of public urinals, and of water troughs for animals; closing of the open culvert at the Central Hall, and the substitution of a water trough.

Isolation hospital and steam disinfecter.

ASHINGTON.

Medical Officer of Health—ALEXANDER BLAIR, M.B.

Area, 2,766 acres; Estimated population, 1896, 9,000; Birth rate, 45·11; Death rate, 17·88; Zymotic death rate, 1·44; Infant mortality rate per 1,000 births, 177·34; Phthisis death rate, 1·00; Death rate from respiratory diseases, 2·22.

This being a new district, the different rates cannot be compared with those of previous years.

The birth rate, 45·11, is one of the highest in the county.

The death rate, 17·88, stands eighth in the urban districts.

The infant mortality rate, 177·34 per 1,000 births, is high.

The Medical Officer of Health points out the startling fact that nearly half the entire death rate is made up by the deaths of children, none of whom attained to the age of one year.

He also states that in all probability the most prolific cause of this high mortality among children is the marked prevalence of tubercular disease in the district, which, under the headings of phthisis, tubes mesenterica,

* 16·74 without including 16 deaths of persons in public institutions.

marasmus, and meningitis, stands highest with a total of 42 deaths, more than a fourth of the entire mortality from all causes.

The Medical Officer of Health also points out the great importance of recognising the fact that consumption is certainly a communicable disease, and that precautions should therefore be taken, as far as possible, to prevent the healthy becoming infected from the sick.

The Infectious Diseases Notification Act was adopted by the council on September 1st, and from that date up to the 31st December 30 cases were notified. Referring to this, the Medical Officer of Health states that after notification of a case of very acute diphtheria at New Hirst, where the child only survived a few hours, the house was promptly and thoroughly disinfected by the inspector, and that there was no spread of the disease.

Improvements. A new water supply, of which Dr. Blair says: "This supply has now been in general use for a few weeks, and though a much harder water than the discarded one, it is clear and palatable, and evidently plentiful, and it is hoped that an extended trial will prove it to be satisfactory in every respect."

Sewer flushing by means of large water tanks at the upper ends. Construction of ventilating shafts for sewers, connected with a chimney stack at each end.

Requirements. An improvement in the sanitary condition of some parts of the district, notably New Hirst, and especially Laburnum Terrace, as to which Dr. Blair says: "Here the conditions of filth and squalor, and appearance of general wretchedness, are such as would be no discredit to the worst slums of any large city."

BEDLINGTONSHIRE.

Medical Officer of Health—D. CARMICHAEL, F.R.C.S., L.R.C.P., Edin.

Area, 8,435 acres; Estimated population, 1896, 18,000; Birth rate, 45·77; Death rate, 16·22; Zymotic death rate, 2·00; Infant mortality rate per 1,000 births, 143; Phthisis death rate, 1·28; Death rate from respiratory diseases, 1·55.

The birth rate is slightly lower than in 1895.

The general death rate is 6·65 per 1,000 lower than in 1895, when it was 22·77, and the zymotic death rate is 1·61 lower than in 1895.

The infant mortality rate (under 1 year) also shows a reduction, being 143 per 1,000 births, as compared with 184 in the previous year.

Of the total deaths (292) 118 were those of children under 1 year, and 48 were of persons over the age of 65.

The deaths from zymotic diseases were 36, distributed as follows:—Scarlatina, 6; enteric fever, 5; continued fever, 1; whooping cough, 7; and diarrhoea, 17. The deaths from diarrhoea were all of children under 5.

Improvements. Provision of a circulating pipe at the end of the main at West Sleekburn to prevent the accumulation of vegetable organic matter.

The laying of a most efficient sewer between Choppington and the river Wansbeck.

Requirements. An alteration of the new sewer by extension into tidal water, or otherwise, between Guide Post and Sheepwash. The outfall at present discharges above the weir, which causes at this point a considerable subsidence of the solid constituents of the sewage.

Improvement in damp and ill-ventilated dairies in the district.

Adoption of the Infectious Diseases Notification Act.

BENWELL AND FENHAM.

Medical Officer of Health—N. HARDCASTLE, M.R.C.S., L.S.A., L.M.L.S.Sc.

Area, 1,367 acres; Estimated population, 1896, 10,500; Birth rate, 40·48; Death rate, 16·48; Zymotic death rate, 1·71; Infant mortality rate per 1,000 births, 152·94; Phthisis death rate, 1·71; Death rate from respiratory diseases, 2·38.

The birth rate is slightly higher than in any of the previous three years.

The death rate is 3·52 lower than in 1895, but is higher than in 1894, when the rate was 13·00 per 1,000.

The infant mortality rate was slightly lower than in 1895.

The zymotic death rate is slightly higher than in 1895, when it was recorded at 1·62.

Improvements. A sewer re-laid at Benwell.

The council have decided not to sanction privies or ashpits in new buildings.

Requirements. An isolation hospital and steam disinfecter.

The following conditions have been brought to the knowledge of the urban district council:—The inefficiency of the sewer on the west turnpike.

Defect in water fittings and ash tubs at Scotswood.

Want of paving, resulting in pools of stagnant water; foul and dilapidated ashpits and privies; imperfect cleansing and scavenging of Malting Row, Benwell.

Dangerous, dilapidated walls, foul and dilapidated ashpits and privies, badly cemented yards, defective water fittings, stopped gullies, imperfect spouting, the necessity of paving back lane of Handyside's Buildings, and the necessity of paving and re-sewering Delaval Terrace.

In this report there is also embodied considerable information, as I wish were the case in every annual report (see remarks paragraph 4, page 25) of the work accomplished in the department, more especially associated with the sanitary inspector.

From the large number of nuisances of various kinds which have been unearthed (choked and defective drains and gullies, foul or defective water-closets, privies or ashpits, foul or badly paved yards, absence of water supply, cases of over-crowding)—the number of visits to infected houses (nearly 800)—the number of interviews with surveyors or agents (over 400)—it is evident that considerable energy has been brought to bear in this important department of any sanitary authority; while the relative number of nuisances *remedied*, houses disinfected, and notices served *and complied with*, are unmistakable indications that the urban district council, the Medical Officer of Health, and the sanitary inspector work energetically and harmoniously together.

BERWICK-UPON-TWEED.

Medical Officer of Health—D. HEAGERTY, L.R.C.P., L.R.C.S., L.M.

Area, 6,507 acres; Estimated population, 1896, 13,330; Birth rate, 30·15; Death rate, 17·85*; Zymotic death rate, 1·12; Infant mortality rate per 1,000 births, 146·76; Phthisis death rate, 1·12; Death rate from respiratory diseases, 1·65.

The birth rate is higher than in 1895, and very slightly lower than in 1894, when it was 30·58.

The death rate is, as the Medical Officer of Health says, normal, while the zymotic death rate is 0·45 lower than in 1895.

The infant mortality rate is, on the other hand, considerably higher than in 1895. This increase Dr. Heagerty attributes to the number of cases of death caused by premature birth and congenital debility.

Improvements. Surface ventilation of main sewers. Renewal of main sewer from Church Street to the Parade, with manholes, and flushing tank. Footpaths and channels renewed in Ropery Lane, Hatter's Lane, Well Close Square, and Castle Terrace. Repaving of Hatter's Lane, Ropery Lane and Ness Street, widening of the Brewery Bank Road at Tweedmouth, and a general improvement as to the channels throughout the place, and the laying of new channels at the west end. New drainage for Spital to be carried out.

Requirements. A steam disinfecter at the isolation hospital. A better system of sewer ventilation. The compulsory ventilation of all w.c.'s. All house drains to be trapped between the houses and the main sewers.

The report of the Medical Officer of Health should be printed and circulated.

BLYTH SOUTH.

Medical Officer of Health—JOHN CROMIE, L.R.C.P., L.R.C.S.

Area, 1,442 acres; Estimated population 1896, 3,978; Birth rate, 47·51; Death rate, †21·11; Zymotic death rate, 2·76; Infant mortality rate per 1,000 births, 142·85; Phthisis death rate, 1·75; Death rate from respiratory diseases, 2·76.

The birth rate is higher than in 1896, while the general death rate is lower than in 1895 by 3·74.

The infant mortality rate is lower by 40 per 1,000 births than in 1895.

The number of deaths from zymotic diseases was 11, distributed as follows:—Diphtheria 1, measles 1, whooping cough 4, and diarrhoea 5. Zymotic death rate decrease, as compared with 1895, 2·62 per 1,000.

Improvements.—Provision of manholes for several of the sewers giving ample ventilation, while two sewers have been taken up and re-laid. The Medical Officer of Health says with respect to this point:—"I hope that soon all the sewers will be provided with manholes and that defective drains will be unknown in this district. This work can only be done piecemeal, but I am pleased to be able to state that it goes on steadily."

The adoption by the authority of the pail system, which it is hoped will become universal.

A larger water main is now being laid from the reservoir, and in the opinion of the Medical Officer of Health there is a reasonable prospect of an ample water supply being available shortly.

The open runner at Newsham is in course of being covered in.

Removal of the old slaughter-houses and the substitution of more commodious and more modern premises.

Better attention to scavenging in the North Ward.

Requirements.—A better system of flushing the sewers in the district.

A more satisfactory system of scavenging in the South Ward, as to which the Medical officer of Health says:—"I would suggest that as soon as practicable the scavenging of this ward be done by your own men as it is in the North Ward."

* 16·35, without including 20 deaths of persons in public institutions.

19·35 without including seven deaths of persons not belonging to the district.

COWPEN.

Medical Officer of Health—R. LAING, L.R.C.P., M.R.C.S.,
Eng., L.M., D.P.H.

Area, 1,737 acres; Estimated population 1896, 15,700; Birth rate, 50·57; Death rate, *22·67; Zymotic death rate, 4·07; Infant mortality rate per 1,000 births, 175; Phthisis death rate, 1·78; Death rate from respiratory diseases, 2·67.

The birth rate is higher by 4·86 than in 1895. The general death rate is lower than in 1895, when it was recorded at 24·80, while the zymotic death rate is slightly lower.

The infant mortality rate is lower by 52 per 1,000 births than in 1895.

The number of deaths from zymotic diseases was 64, distributed as follows: Scarlatina, 6; enteric fever, 9; continued fever, 1; measles, 17; whooping cough, 17; and diarrhoea, 14.

There were no cases of smallpox.

The highest general death rate was at Cowpen village, where it reached 39·2. The Medical Officer of Health says:—"Many of the houses rank "amongst the oldest in the district, and the sanitary condition and habits of "the people are of an antiquated character."

The urban district of Cowpen stands highest in the county as regards the general death rate; it is the second highest in respect of the zymotic death rate, and the infant mortality rate is also high. As I have frequently pointed out the death rate for one year, in any particular district, cannot alone be relied upon as an indication of the healthiness, or the reverse, of this neighbourhood. Still, when any district or portion of a district, furnishes a *persistently high* death rate, and especially if the mortality brought about or fostered by insanitary conditions be high, an indication is afforded that some local influences are responsible for those conditions. The following table shows the general death rate and the zymotic death rate for the urban district of Cowpen, taken as a whole, during the last three years, also for those portions of it in which have been registered a high death rate either from general causes or from zymotic diseases:—

1894.—Cowpen Urban District	general death rate	...	...	18·9
"	"	zymotic death rate	...	2·7
"	Newsham Freeholds	general death rate	...	29·61
"	"	zymotic death rate	...	8·46
"	Kitty Brewster, Farms, and Cowpen Village			
		general death rate	...	21·66
"	"	zymotic death rate	...	3·25
"	Isabella Pit and Cowpen Colliery	general death rate		24·20
"	"	zymotic death rate	...	3·72
"	Crofton	general death rate	...	21·81
"	"	zymotic death rate	...	2·42
"	Cowpen Colliery	general death rate	...	19·84
"	"	zymotic death rate	...	3·39
1895.—Cowpen Urban District	general death rate	...	...	24·1
"	"	zymotic death rate	...	4·9
"	Kitty Brewster, &c.,	general death rate	...	17·6
"	"	zymotic death rate	...	10·07

1895.—Crofton general death rate	...	...	...	29·0
„ „ „ zymotic death rate	...	...	...	8·48
„ Newsham Freeholds general death rate	...	...	...	28·2
„ „ „ zymotic death rate	...	...	...	2·82
„ Cowpen Quay, general death rate	...	...	...	26·8
„ „ „ zymotic death rate	...	...	...	5·83
„ Isabella Pit and Cowpen Colliery general death rate	...	...	...	24·2
„ „ „ zymotic death rate	...	...	...	3·72
„ Hodgson's Mill and Cowpen Square general death rate	...	...	...	11·3
„ „ „ zymotic death rate	...	...	...	4·26
1896.—Cowpen Urban District general death rate	...	...	...	22·1
„ „ „ zymotic death rate	...	...	...	4·4
„ Kitty Brewster, &c., general death rate	..	...	...	39·2
„ „ „ zymotic death rate	...	...	...	10·07
„ Crofton general death rate	...	...	...	31·5
„ „ „ zymotic death rate	...	...	...	3·63
„ Newsham Freeholds general death rate	...	...	...	27·6
„ „ „ zymotic death rate	...	...	...	2·63
„ Isabella Pit and Cowpen Colliery general death rate	...	...	...	24·2
„ Cowpen Quay general death rate	...	...	...	23·2
„ „ „ zymotic death rate	...	...	...	5·37
„ Bebside Colliery and Iron Works general death rate	...	...	...	22·6
„ „ „ zymotic death rate	...	...	...	2·98

It will be seen from the above table that both the general and the zymotic death rates have been almost uninterruptedly high during 1894, 1895, and 1896 for the whole district, and especially so for those portions included under the headings of (1) Kitty Brewster Farms and Cowpen Village (2) Isabella Pit and Cowpen Colliery, (3) Crofton, (4) Newsham Freeholds, (5) Cowpen Quay, (6) Hodgson's Mill (although some of these localities have many of the characteristics of rural districts), than obtained for the urban district of Cowpen, taken as a whole. The very unsatisfactory condition of the sewerage of this urban district, and the total insufficiency of its water supply, have frequently been brought to the knowledge of the district council, and it is much to be hoped that these defects will be remedied before they result in some widely spread outbreak of preventible disease. The report of the Medical Officer of Health is, as usual, one of the most complete and exhaustive of any received. The district is divided into localities, with the population, number of deaths (from all causes and from each cause) appended. There is also a table showing the estimated population, number of deaths, and death rate, deaths under one year, and the same per 1,000 births during each of the past 11 years, and a tabulated report from the inspector, dealing under each heading with all the eight sub-divisions of the whole district.

Improvements. Some slight improvement has been made in the sewerage.

Requirements. A thorough overhauling and, in many cases, re-construction of the sewerage system. Very much more abundant and satisfactory water supply for most of the district; the abolition or re-construction of a large number of privies and ashpits, the former being, as the Medical Officer of Health points out, deficient in ventilation, and the latter polluting the ground water. The provision of steam disinfectors. The printing and circulating of the report of the Medical Officer of Health.

* 22·16 without including 8 deaths of persons not belonging to the district.

† 10·92 without including 58 deaths of persons in public institutions.

CRAMLINGTON.

Medical Officer of Health—ROBERT ANDERSON, M.D.

Area, 3,583 acres; Estimated population 1896, 6,100; Birth rate, 35·08; Death rate, 16·72; Zymotic death rate, 3·44; Infant mortality rate per 1,000 births, 172·90; Phthisis death rate, 1·80; Death rate from respiratory diseases, 2·62.

The birth rate is lower than in 1895, but higher than it was in 1894, when it was recorded at 32·5. The average birth rate for the three years is 35·5.

The general death rate is slightly higher than in 1895, when it was 16·55, and the average of the last three years is 15·3. The zymotic death rate is lower by 0·93 than in 1895, and the average for the last three years is decidedly low, taking into account the nature of the district and the housing and surroundings of the people.

The infant mortality rate under 1 year per 1,000 births is nearly the same as in 1895.

A severe epidemic of measles broke out at Shankhouse in the month of June and continued until September. The number of cases was considerable, and four terminated fatally. Several cases also occurred at Cramlington village and at East and South Cramlington. The schools in the infected districts were closed for a month; but the Medical Officer of Health states that this had no effect in lessening the prevalence of the disease, in consequence of the indiscriminate visiting of the sick by the healthy.

Improvement. The Medical Officer of Health reports a great improvement in the more frequent emptying of ashpits and privies to the great benefit of the inhabitants; also that the filtering tanks for the treatment of sewage already in use are in good working order.

Requirements. The new filtering tank for East Cramlington should be set in action without delay, so as to prevent pollution of the stream and to secure the free discharge of sewage. A steam disinfecter is required for this district. The report of the Medical Officer of Health should be printed.

GOSFORTH.

Medical Officer of Health—W. GALBRAITH, L.R.C.P., L.R.C.S.

Area, 1,303 acres; Estimated population 1896, 6,500; Birth rate, 25·07; Death rate, †19·84; Zymotic death rate, 0·92; Infant mortality rate per 1,000 births, 116·56; Phthisis death rate, 1·84; Death rate from respiratory diseases, 0·92.

The birth rate is higher and the death rate lower than in 1895. The zymotic death rate is the same. The infant mortality rate is slightly higher.

Improvements. Several nuisances abated. 48 new houses completed and their sanitary arrangements efficiently watched during construction. 43 other new houses are in course of erection.

Requirements. Isolation hospital accommodation and a steam disinfecter are required for this district. The report of the Medical Officer of Health should be printed.

HEXHAM.

Medical Officer of Health—D. JACKSON, M.D.

Area, 5,136 acres; Estimated population, 1896, 6,000; Birth rate, 26·83; Death rate, *17·33; Zymotic death rate, 2·16; Infant mortality rate per 1,000 births, 155·28; Phthisis death rate, 0·63; Death rate from respiratory diseases, 2·66.

The birth rate is lower than in 1895, and below the average of birth rates, which is nearly 31·00. The death rate is lower than in 1895, when it was 20·18, or after deducting the deaths of persons from other districts, 17·99.

The zymotic death rate is higher than in 1895, and so is the infant mortality rate.

There were 600 cases of infectious diseases notified during the year, causing 13 deaths.

Improvements. The mode of sewage disposal has been altered and much improved; 18 new houses have been occupied during the year, and a large number of plans submitted and approved for new houses, additions to houses, stables, &c. Sixty-three nuisances arose from privy middens; it is most gratifying to note that 21 of these erections have been abolished. 750 yards each of new sewer and new water main have been laid, and a considerable amount of road and footway paving of new streets has been completed, drains and other sanitary arrangements overhauled and put right.

Requirements. The provision of an isolation hospital (with steam disinfectors), the necessity for which the Medical Officer of Health again urges upon the urban district council, "to which first cases could be removed, "where such first cases are so situated as to exclude the possibility of isolation "at home, and thus, outbreaks of such diseases would, in many instances, be "prevented."

Public slaughter houses, "the existing, classed as a whole, being totally "unfit for the slaughtering and keeping of healthy meat."

The discontinuance of the cattle market in Priestpopple.

Greater attention to the proper housing of animals, especially in the case of milch cows, and the sanitary conditions of dairies.

* 16·00 without including 8 deaths of persons from other districts.

MORPETH.

Medical Officer of Health—F. W. SKRIMSHIRE, M.R.C.S., L.S.A.

Area, 323 acres; Estimated population 1896, 5,369; Birth rate, 32·22; Death rate, *21·19; Zymotic death rate, 0·93; Infant mortality rate per 1,000 births, 185; Phthisis death rate, 3·16; Death rate from respiratory diseases, 2·79.

The birth rate is lower than in 1895, when it was 36·24. The death rate and zymotic death rate are both lower, while the infant mortality is much higher, it having been 125 per 1,000 births in 1895.

The phthisis death rate is also high, and on this point Dr. Skrimshire refers to the fact that in Morpeth and its immediate surroundings there are upwards of 180 cows fed in byres, and that in many cases they are occupying spaces already overcrowded with human dwellings and using the air which should be devoted to prolong the lives of the infant population.

Improvements. The confirmation by the Local Government Board of some of the borough bye-laws. An excellent additional water supply procured by pumping from the bore hole at Tranwell. The Tranwell reservoir cleaned out and deepened. The contract for Mr. Dinnings scheme for further water supply has been signed and the works are proceeding. These include the

formation of a second settling reservoir, two filter beds, and a direct supply tank which will receive the pure spring water from the bore holes and the filtered water from the reservoirs, and will provide an ample and continuous supply of pure water sufficient for all the needs of the community and at a high pressure. A new sewer has been laid from the outfall of the sewerage scheme of the Thorp estate to the main sewer at Dawside. The settling tanks on the Low Stanners have been regularly emptied, and the whole sewerage system is in a more efficient condition, and the flow of sewage consequently less slow and stagnant than formerly was the case. The scavenging has been regularly and efficiently performed. A new tumbler steel mud cart has been purchased and is used for the removal of the boxes at the slaughter houses. It has been decided to apply to the Local Government Board for a loan with a view of improving the internal sewerage of the town, and by the erection of sewage disposal works or other means, to cease the pollution of the river Wansbeck by crude sewage.

Requirements. The removal of all slaughter-houses from the town and provision of public slaughter-houses outside its precincts. The immediate enforcing of the bye-laws in relation to houses and dwellings, particularly with a view to the whitewashing and cleansing of tenemented property. A new market for cattle to avoid the constant pollution of the streets, which, being macadamized, cannot be properly cleaned. Isolation hospital, steam disinfectory, and mortuary.

*19-55 without including the deaths of 12 persons in the workhouse who were strangers to the district.

NEWBIGGIN-BY-THE-SEA.

Medical Officer of Health—J. CUNNINGHAM, L.R.C.P., L.R.C.S., L.M.

Area, 337 acres; Estimated population, 1896, 2,367; Birth rate, 37·18; Death rate, 10·98; Zymotic death rate, 0·84; Infant mortality rate per 1,000 births, 125; Phthisis death rate, 0·84; Death rate from respiratory diseases, 2·53.

The birth rate is considerably higher than in 1895, when it was 31·63. The death rate is nearly 4·00 per 1,000 lower than in 1895, and the infant mortality rate is also much lower.

The zymotic death rate is also low, although in 1895 there were no deaths from zymotic diseases.

Dr Cunningham reports that until the beginning of May the district was free from all infectious diseases. Then there was an outbreak of scarlet fever (4 cases). These, fortunately, were of a mild type, and all patients made a good recovery.

During the month of July there was an outbreak of measles of a mild type. The cases were numerous, but there was only one death.

Improvements. Cleansing of the Station well. An abatement of the nuisance on the beach caused by the fishermen leaving offal lying about.

Requirements. Some provision for the isolation of infectious cases, and for the disinfection of bedding, clothing, &c.

The Medical Officer's report should be printed.

NEWBURN.

Medical Officer of Health—A. W. MESSER, M.B., C.M., B.Sc.

Area, 4,803 acres; Estimated population, 1896, 8,962; Birth rate, 35·37; Death rate, 14·39; Zymotic death rate, 1·78; Infant mortality rate per 1,000 births, 123; Phthisis death rate, 1·78; Death rate from respiratory diseases, 2·56.

The birth rate is lower than that for 1895, when it was 39·84. The general death rate and the zymotic death rate are both lower than in 1895. The infant mortality rate is lower by 22 per 1,000 births.

The phthisis death rate and the death rate from respiratory diseases are both slightly higher.

The number of deaths from zymotic diseases was 16, distributed as follows :—Enteric fever, 6 ; whooping cough, 2 ; diarrhœa, 8.

The adoptive Acts in force are the Infectious Diseases (Notification) Act, the Public Health Amendment Act, and the Infectious Diseases Prevention Act.

The Medical Officer of Health lays stress upon the dangers arising from insanitary cow byres and dairies, the folly of any district council omitting to adopt regulations under the Cowsheds, Dairies, and Milk Shops Order, and the necessity for popular instruction in matters relating to health.

Improvements. A great improvement is gradually being made in the dwellings by reason of the erection of new buildings. The water supply is now good and constant. An efficient sewerage system is being actively carried out throughout the district, and the Medical Officer of Health states “that shortly the whole of the district will be most efficiently sewered.” Want of spouting remedied in many instances. Erection of privies and ash-pits in several places where there was an absolute lack of such accommodation.

Requirements. A revised set of bye-laws, the present being those in force when the urban district of Newburn formed a part of the rural district of Castle Ward. A further improvement in the dwellings in many parts of the district, and the closing of several as unfit for habitation. The prevention of the pollution of all the streams throughout the district. The abolition or reconstruction of the large uncovered and uncemented midden privies in many parts of the district. The provision of an isolation hospital and means for disinfection. Much greater stringency in relation to the inspection of dairies and cowsheds, and regulations under the Dairies, Cowsheds, and Milkshops Order.

ROTHBURY.

Medical Officer of Health—F. BARROW, M.R.C.S., L.S.A.

Area, 948 acres ; Estimated population 1896, 1,300 ; Birth rate, 18·46 ; Death rate, *11·54 ; Zymotic death rate, 0·77 ; Infant mortality rate per 1,000 births, 88·33 ; Phthisis death rate, 0·77 ; Death rate from respiratory diseases, nil.

This being a new district, having only been formed in 1896, no comparison of birth or death rates, or other statistics, can be made.

The death rate is low, and the district appears to have been in a very healthy condition.

There was only one death from zymotic disease—that of an infant, who succumbed to diarrhœa—one death from phthisis, and none from any of the diseases usually described as “respiratory.”

Improvements. Better arrangements for cleansing, &c., at the slaughter houses. Improvements in Bridge Street. The discharge of the South Terrace sewer above high water mark remedied. Cleansing of the Coplech conduit. Insanitary conditions of various properties remedied. Steps taken at Addyheugh Well with a view of preventing pollution and waste of water. Renewed pipes for drainage. Several privies have been replaced by water closets. Defective ashpits repaired or reconstructed. Defective gullies replaced and water closet soil pipes ventilated.

* 10·00 without including two deaths of persons not belonging to the district.

Requirements. Adoption of the Infectious Diseases Notification Act. Provisions for isolation of infectious persons, and for the efficient disinfection of infected clothing. The printing of the medical officer's annual report.

SEGHILL.

Medical Officer of Health—R. ANDERSON, M.D.

Area, 1,425 acres; Estimated population, 1896, 2,300; Birth rate, 29·13; Death rate, 16·52; Zymotic death rate, nil; Infant mortality rate per 1,000 births, 164; Phthisis death rate, 1·74; Death rate from respiratory diseases, 2·17.

The birth rate is lower than it has been for the last four years (inclusive.) The death rate is lower than in 1895, and is below the average of the last four years.

The infant mortality rate is 46 per 1,000 births higher than in 1895.

Improvements. Sanitary work well carried out.

Requirements. The adoption of the Infectious Diseases Notification Act. Provision of an isolation hospital and disinfector. The report of the Medical Officer of Health should be printed.

TYNEMOUTH.

Medical Officer of Health—J. E. GOFTON, L.R.C.P., M.R.C.S.

Area, 4,303 acres; Estimated population, 1896, 50,670; Birth rate, 29·68; Death rate, *16·67; Zymotic death rate, 0·90; Infant mortality rate per 1,000 births, 130; Phthisis death rate, 1·40; Death rate from respiratory diseases, 2·01.

The birth rate is lower than in 1895, when it was recorded at 31·80. The general death rate and the zymotic death rate are both lower than in 1895, when they were 20·99 and 2·40 respectively.

The infant mortality rate is lower by 21 per 1,000 births than in 1895.

With respect to the general death rate Dr. Gofton gives the figures as follows:—

Total number of deaths taking place in the district...	845
Deaths of persons belonging to the district but who died elsewhere, <i>i.e.</i> ,	
County Asylum ...	16
Wallsend Hospital ...	1
	— 17
	862
<i>Deduct</i> deaths of persons who died in the district but who did not belong to it, <i>i.e.</i> ,	
Workhouse ...	35
Tynemouth Infirmary..	2
Visitors ...	16
	— 53
	809

This makes the net death rate 15·96, but as the 17 deaths mentioned above are accounted for by two other Medical Officers of Health in whose respective districts the deaths occurred, it is more accurate to quote the net general death rate of Tynemouth as 15·63.

* 15·63, excluding 53 deaths of persons not belonging to the district.

Improvements. Continued improvement in the seamen's lodging-houses, and in the common lodging-houses, where overcrowding is now completely stopped. Eight houses and tenements, containing 21 rooms, unfit for human habitation, have been closed. Many other houses have been made fit for habitation to the satisfaction of the authority, after notices had been served; the nuisance complained of at the Fish Guano Works has been considerably abated, great improvement is noticeable in the fish-curing houses; the substitution of pail closets for the old privy midden in a large number of cases. The remedying of defective drains, ashpits, privies, water closets, urinals, &c., and the cleansing of filthy privies and water closets.

Requirements. The Medical Officer of Health again strongly emphasizes, as he does in each annual report, the urgent need of increased hospital accommodation for isolating cases of infectious disease. Three cases of small-pox were imported into the district by sailors, from which two other people became infected. All five were removed to hospital—all recovered—and there was no spread of the disease. Several cases of diphtheria had to be refused admission from lack of accommodation, and as I have before pointed out, there are so many facilities for sailors, in the first stage of infectious disease, landing in, or in the immediate neighbourhood of this borough, that the urban district council should unquestionably be in a position to immediately isolate two different diseases in both sexes, which would necessitate the provision of, at least, four distinct wards. This report, which is very much more comprehensive and complete than many of those received, contains some useful and instructive tables. The borough is divided into localities, with the number of deaths taking place in each set forth, and the annual death rates both general, and from zymotic diseases given. These are points of very great interest. There is also a meteorological table, and tables showing the number and nature of proceedings before the magistrates for offences under the Public Health Act, and the Sale of Food and Drugs Act. Another table gives an account of the samples of articles procured for analysis and forwarded to the public analyst. Eight samples were taken during the year (consisting of bread, coffee, and milk), and this number appears to be very small for a borough of this size and importance, especially when it is noted that 25 per cent. of the samples taken were found to be adulterated.

WALKER.

Medical Officer of Health—H. FRAZER-HURST, L.R.C.P., L.R.C.S., L.M.

Area, 1,203 acres; Estimated population, 1896, 12,500; Birth rate, 36·40; Death rate, *18·08; Zymotic death rate, †3·76; Infant mortality rate per 1,000 births, 147·25; Phthisis death rate, 1·60; Death rate from respiratory diseases, 2·40.

The birth rate is higher by 5·03 than that recorded in 1895.

The general death rate and the zymotic death rate are both lower than in 1895, when they were 20·57 and 5·46 respectively, or without including deaths of persons not belonging to the district, 16·40 and 2·20.

The infant mortality rate is lower by 35 per 1,000 births.

The deaths from the seven principal zymotic diseases, exclusive of those occurring in the isolation hospital from beyond the district, were 26, distributed as follows:—Scarlatina, 3; diphtheria, 1; enteric fever, 1; measles, 17; whooping cough, 1; and diarrhoea, 3. Four cases of scarlatina and one of diphtheria were removed to hospital, and they all recovered.

There were 88 notifications received by the Medical Officer of Health.

Improvements. Some houses unfit for human habitation have been pulled down.

* 15·84 without including 28 deaths of persons not belonging to the district.

† 2·08 without including 21 deaths in "City" hospital.

Requirements. The abolition of several ill-constructed privy ashpits and middens which still exist, particularly at the back of Church Street and Lamb Street.

The remedying of structural defects in several houses in Church Street, Back Victoria Street, and the complete demolition of the Jane Pit cottages.

A more complete carrying out of the spring white-washing of passages, &c.

The construction of a proper road in front of Diamond Row, or the demolition of the cottages of which the row consists.

The provision of an additional urinal near the Neptune shipyard.

The prevention of over-crowding owing to the rapid increase of the population and the very small number of new houses being built.

WALLSEND.

Medical Officer of Health—THOMAS WILSON, L.R.C.P., M.R.C.S.

Area, 1,202 acres; Estimated population, 1896, 15,000; Birth rate, 31·46; Death rate, *12·73; Zymotic death rate, 1·20; Infant mortality rate per 1,000 births, 120·76; Phthisis death rate, 0·93; Death rate from respiratory diseases, 1·87.

The number of births was 472, giving a birth rate of 31·46, as compared with 30·28 in 1895.

The death rate was lower than in 1895, when it was 15·57, being a reduction of 3·24 per 1,000.

The zymotic death rate was 0·44 lower than in 1895.

The infant mortality rate (under 1 year) was 20·75 lower than in 1895, when it was 141·51 per 1,000 births.

Improvements. The removal of 21 old privy middens and the provision of 192 new box closets.

Requirements. Bye-laws relating to the building of new houses, the necessity for which is amply demonstrated by the fact that several houses have been built upon ground formerly occupied by privies and ashpits without any special precautions having been taken; down spouts in many cases delivering on to the ground close to the floor ventilators, and mortar of a most inferior quality being used. The provision of good roads to new houses, as in many instances there are none, and children going to school have to sit all day with wet feet. The Medical Officer's report should be printed.

WEETSLADE.

Medical Officer of Health—ALLAN WALKER, M.B., C.M.

Area, 2,257 acres; Estimated population, 1896, 5,000; Birth rate, 40·00; Death rate, 20·20; Zymotic death rate, 4·40; Infant mortality rate per 1,000 births, 190; Phthisis death rate, 1·00; Death rate from respiratory diseases, 1·60.

The birth rate is lower by 1·60 than in 1895, and the death rate is higher by 3·40, having been in 1895 16·80.

The zymotic death rate is also higher, being 4·40, as compared with 3·00 in the previous year.

The infant mortality rate (under 1 year) shows a marked increase, viz., 190 per 1,000 births, as compared with 153·84, and is the highest recorded in

* 12·33 without including 6 deaths of persons not belonging to the district.

the county. The increase in the zymotic and infant mortality rates are partly accounted for by the several epidemics of measles in the district during the year, especially at Dudley and Seaton Burn.

Improvements. Improved drainage at Fisher Lane and Old Wideopen. New channel in the square at Hazelrigg. Outoffices at Annitsford.

Requirements. The removal of badly-constructed and filthy privies and ashpits, and more thorough emptying at shorter intervals. Though some improvement is noticeable about the colliery rows, still both at Seaton Burn and Dudley many of the roads are in a very wet and muddy condition, aggravated in some cases by deficient spouting and absence of surface channels. Privy accommodation is needed at Fyne's Buildings, where ten tenants with average families are without any. A better water supply for Seaton Burn. An isolation hospital and disinfecter.

WHITLEY AND MONKSEATON.

Medical Officer of Health—P. ALEXANDER, L.R.C.P., L.R.C.S., L.M.

Area, 1,540 acres; Estimated population 1896, 4,985; Birth rate, 16·44; Death rate, *8·82; Zymotic death rate, 0·40; Infant mortality rate per 1,000 births, 73; Phthisis death rate, 0·60; Death rate from respiratory diseases, 2·00.

The birth rate is 5·08 lower than in 1895.

The general death rate is 5·44 per 1,000 less than 1895, and deducting 14 deaths of persons not belonging to the district, the net general death rate is 6·02 as against 11·26 in 1895.

The zymotic death rate is 1·77 lower than in 1895.

The general death rate is the lowest in the county.

There were 18 cases of infectious diseases notified during the year. Of the total deaths 9 were of persons over the age of 70 and of an average age of 76.

Requirements. The more frequent emptying of large ashpits in the outlying districts by the farmers, who at present allow them to become too full; the work should be done in the early morning. The removal of the cause of the stench much complained of and which arises from sewage, sewer gas, or decomposed seaweed below the cliffs at the foot of Percy Road and towards the corkscrew staircase. The sewer pipe at the same place should be carried further out so that the end may always be under water. The Medical Officer's report should be printed.

* 6·02 without including the deaths of 14 persons not belonging to the district.

WILLINGTON QUAY.

Medical Officer of Health—C. T. U. BABST, L.R.C.P., L.R.C.S.

Area, 336 acres; Estimated population, 1896, 8,050; Birth rate, 29·81; Death rate, 16·40; Zymotic death rate, 1·98; Infant mortality rate per 1,000 births, 150; Phthisis death rate, 0·74; Death rate from respiratory diseases, 2·36.

The birth rate is lower than in 1895, when it was recorded at 35·47.

The general death rate and the zymotic death rate are both lower than in 1895, when they were respectively 18·61 and 2·26.

The infant mortality rate is lower by 20 per 1,000 births than in 1895.

The number of deaths from zymotic diseases was 16, distributed as follows:—Scarlatina, 11 enteric fever, 1; measles, 1; whooping cough, 2; and diarrhœa, 1.

Zymotic Diseases. The mortality rate is 0·35 per 1,000 below that obtaining for 1895, and 0·53 below that of 67 large English towns.

In this report also the district is divided into localities, and the number of deaths for each locality given. If the population of each of these localities had been stated as well as the mortality, additional interest would have attached to this table.

The isolation hospital was of very great value during an outbreak of scarlatina, when 100 cases were notified, 44 of which were removed to hospital, equalling 44 per cent. Of these 3 only died, or 6·8 per cent. Of 56 cases treated at home 8 died, being 14·3 per cent.

Nine cases of enteric fever were notified, 5 of them were sent to the hospital, and all recovered.

The Medical Officer of Health says, “Judging by these figures I think I may safely say that if none of these cases had been sent to the hospital, in all probability several more lives would have been lost, indeed, statistics from various isolation hospitals in the county show that the death rate from scarlet fever in these institutions is generally low, and I consider that I am not wrong in stating that this district has not only benefitted directly by the hospital, through the saving of several lives in cases that have actually occurred, but indirectly also through the fact that 44 centres of infection were removed from some of the most crowded parts of the district. I am certain that but for the hospital, the epidemic instead of being limited to a hundred cases, would have extended to twice or three times that number, with, of course, a proportionate increase in the number of deaths, especially as during the month of May fresh infection was brought from two different sources outside the district. With regard to the cases that were treated at their own houses, I regret to say that, notwithstanding the pains taken by the inspector and myself to give practical advice on this subject, a good deal of carelessness and ignorance was displayed in the treatment of the disease by the parents of the children affected, especially with reference to isolation. I am certain that in many cases which came under my observation in houses where isolation was supposed to have been carried out, the disease attacked several children in succession, simply owing to the neglect of the necessary measures.”

Improvements. In Nelson Street and Potter Street a good many privy ashpits have been converted into ash-closets, and several yards cemented; and on the east side of Hodgson Street pail-closets have been adopted in six of the yards.

The Brewery cottages have been closed, the George Inn repaired, and in the old Howdon district a few ashpits have been converted into ash-closets. A new roof has been put on to the Dock Inn in Church Street.

Requirements. Greater attention to cleanliness in scavenging. Many of the public stairs require cleansing and limewashing. Improvements urgently needed in certain old houses in Chapel Street, Brunton Street, Main Street, Dock Street, Stephenson Street, Palmer’s Terrace, Keelman’s Row, and Ravensworth Street. With respect to the old houses in Chapel Street, Brunton Street, Main Street, and Dock Street, the Medical Officer of Health states “they are practically in the same condition as when I reported upon them last year,” and he goes on to say:—“Amongst the most insanitary of these places I may mention the old Globe property (Dock Street). This is a block of tenements, all, more or less, in a dilapidated state; most of the walls are damp, the ceilings and partitions defective, the back stairs, which are below the level of the front street, nearly without light, damp and unwholesome, the yard not properly paved, and, consequently, always in a dirty condition. A notice was served upon the owners to thoroughly repair the premises, but at the end of the year nothing had been done. In connection with this property, I may state it as my opinion that it will not only be advisable, but before

“long absolutely necessary to raise the whole of Back Dock Street to the level of Main Street and Tyne View Terrace.” And with regard to Palmer’s Terrace:—I have merely to repeat what I said in last year’s report, that “on account of the small size of the yards in the row of houses on the south side, between the Alma Steps and the Ballast Hill, and the impossibility of enlarging these without encroaching upon the street, the adoption of water-closets is the only plan which holds out any prospect of getting rid of the present unhealthy conditions.”

In Keelman’s Row a great improvement could be effected by the removal of the ash-closets and slopsinks from their present site to the rear of the premises. The block of old houses at the top of Ravensworth Terrace have very damp walls, and although the roof has recently been repaired, Dr. Babst thinks the benefit will only be temporary. Having inspected all the properties alluded to in the above extract from Dr. Babst’s report, I entirely endorse the views therein expressed, and also his observations on the value of the isolation hospital.

RURAL DISTRICTS.

ALNWICK.

Medical Officer of Health—SCOTT PURVES, M.D.

Area, 89,950 acres; Estimated population, 1896, 12,176; Birth rate, 27·10; Death rate, 14·86; Zymotic death rate, 1·06; Infant mortality rate per 1,000 births, 130·33; Phthisis death rate, 1·31; Death rate from respiratory diseases, 0·99.

The births were 330, being 7 less than in 1895, giving a birth rate of 27·10, as compared with 27·67 in the previous year.

The general death rate 14·86 is 3·37 lower than that for 1895, when it was 18·23.

The infant mortality rate (under 1 year, per 1,000 births registered) is 41·77 lower than in 1895, when the rate was 172·10; the number of deaths at that age period being 43 and 58 respectively.

The zymotic death rate is also lower than in 1895 by 1·30 per 1,000.

There were 147 cases of infectious diseases notified in the district, viz.:—Scarlet fever, 121; erysipelas, 15; typhoid fever, 5; diphtheria, 5; and croup, 1. The number of cases notified in 1895 was 187.

Improvements. Extended and improved water supplies at Alnmouth, Brotherwick, and Greensfield. There is also a scheme under way for relaying the water mains at Eglingham, and for otherwise improving and modernising the water works. Extension of the Hauxley and Togston water works, by the addition of a second spring at Sturton Grange, and taking a supply to Bondicar and Togston Barns. A good and adequate supply of water to Newton Barns by the extension of the Brunton water works. The protection of the well at Coquet House, Warkworth Moor, from surface and other pollution. Arrangements for the periodical cleaning of the Butts water works at Warkworth. The supply of water by the Amble District Council to Bramshaugh Farm and Hazon Lee. Improvements in drainage and sewerage have been carried out at Boulmer, Boulmer Moor, Craster, High Pow Burn, Newton-on-the-Moor, Warkworth, and West Hedgeley; while new sewerage schemes are under consideration for Glanton and Togston Hall. Improvements in paving under the Private Street (Works) Act, 1892. At Alnmouth three offensive privies have been replaced by water closets. At Bilton a refuse heap, a pig-stye, and poultry pens have been removed from the vicinity of the water tank. Privies or ashpits have been built in several places for houses formerly unprovided with these out-offices. The appointment of a public scavenger at Togston, which has proved to be an immense sanitary advantage.

In this report the sanitary district is divided into sub-districts, for each of which is given the number of births and birth rate, the total number of deaths from all causes; the number and nature of infectious diseases notified and the number of deaths caused by each notifiable disease. The report would be rendered still more complete if the population of each sub-district and the general and zymotic death rates for each were included in the same table.

Requirements. Improvements at the Burghers' private water works at Warkworth. The pipes are almost completely furred up. The Medical Officer of Health suggests that the burghers' committee should vest the works in the District Council, as the higher part of Warkworth is suffering a sanitary drawback by reason of the condition of the pipes. Good and adequate water supplies for the following places, viz.:—Abberwick (Acklington High Park), Broomhill Cottage, Craig's House, Dean Moor, Glanton Mile End, Glanton North Field, Middle Cawledge Park, Sherton Grange Farm, and West Cawledge Park. An isolation hospital and steam disinfecter.

BELFORD.

Medical Officer of Health—J. G. MACASKIE, L.R.C.P., L.R.C.S., D.P.H.

Area, 38,586 acres; Estimated population, 1896, 4,852; Birth rate, 27·20; Death rate, 15·25; Zymotic death rate, 1·03; Infant mortality rate per 1,000 births, 113·63; Phthisis death rate, 1·03; Death rate from respiratory diseases, 2·47.

The birth rate is a little higher than in 1895, when it was 26·90. The death rate is lower than in 1895, when it was 19·98. The zymotic death rate is also lower by 0·60.

The infant mortality rate (under 1 year) was higher than in 1895 by 22·73 per 1,000 births.

Of the 74 deaths which occurred, 15 were of children under 1 year, and 25 (more than one-third) were of persons of 65 years and upwards.

The deaths from zymotic diseases were 5 in number, distributed as follows:—Diphtheria, 1; enteric fever, 3; diarrhoea, 1.

Improvements. These are noted in the water supplies for Detchant, Bamburgh, and Bamburgh Friars Farm; in the drainage at Adderstone, Greenhill, Belford, Bamburgh, and Beadenell; also in the construction of new and improved ash-pits at Belford, Crag Mill, Warenton, and Warenford, and in re-spouting of houses at Lucker and Detchant.

Requirements. The Medical Officer of Health calls attention to the nuisance and danger to health arising from large, badly constructed, and uncovered ash-pits, many of which are within a few yards of dwelling-houses, and to the necessity of these being remodelled and emptied at regular and shorter intervals; also to the injury to health from unspouted and otherwise damp dwelling-houses, and to the urgent need of a permanent isolation hospital and steam disinfecter. The Medical Officer of Health divides this sanitary district, for statistical purposes, into eleven sub-districts, and gives for each of the latter the number of cases of infectious disease notified during the year. If the population of each sub-district were available so that the attack rate and the death rate could be calculated, the value of this report would be materially enhanced.

BELLINGHAM.

Medical Officer of Health—J. P. ELLIOT, L.R.C.P., L.R.C.S., L.M.

Area, 238,201 acres; Estimated population 1896, 6,000; Birth rate, 21·16; Death rate, 16·33; Zymotic death rate, 0·66; Infant mortality rate per 1000 deaths, 125·82; Phthisis death rate, 1·16; Death rate from respiratory diseases, 1·33.

The birth rate is lower than 1895, when it was 24·91.

The general death rate is lower than in 1895 by 3·53 per 1,000, but the zymotic rate is more than double, and the infant mortality rate (under 1 year) is increased by 14·71 per 1,000 births.

Of the total number of deaths (98) 16 were those of children under 1 year, and 38 were those of persons over 65. The aggregate of those two age periods accounting for more than half the deaths in the district.

Scarlet fever was very prevalent in the early part of the year, and at no period was the district entirely free from the disease, which, however, caused only 3 deaths. Whooping cough was prevalent nearly all over the district, while measles was confined to the parishes of Wark, Elsdon, and Otterburn; neither whooping cough nor measles caused any deaths.

Improvements. A great number of privies have been removed to proper distances from dwelling houses. Privies provided for houses previously without any. Several sewers and drains altered or relaid, and provided with suitable gullies and traps. New drains and privy accommodation at Plashetts. The closing of the churchyard at Bellingham, and the provision of a cemetery. An additional water supply to the town. The erection of several new houses, for which main sewers have been laid by the authority. The completion of the sewage system at Wark, and the supply to the village of a good and abundant water supply. Improvement of the sewers at East and West Woodburn. The adoption of the Infectious Diseases Notification Act.

Requirements. A new water supply and sewerage scheme for Otterburn. Improved sanitary conditions of Stannersburn. Better water supplies at Birtley and East and West Woodburn. Better privy accommodation at East and West Woodburn. A depot for refuse for the town of Bellingham. Regular cleansing of the common ashpits by the rural district council. Improvement in the sanitary surroundings of many farm houses and steadings throughout the district. The provision of an isolation hospital and steam disinfectors. The printing of the medical officer's report.

CASTLE WARD.

Medical Officer of Health—G. H. FITZGERALD, M.D.

Area, 85,219 acres; Estimated population 1896, 9,574; Birth rate, 25·90; Death rate, 11·90; Zymotic death rate, 0·52; Infant mortality rate per 1,000 births, 97; Phthisis death rate, 1·14; Death rate from respiratory diseases,

The birth rate is nearly the same as in 1895.

The general death rate and the zymotic death rate are both lower than in 1895, when they were 15·01 and 1·68 respectively.

The infant mortality rate is lower by 54 per 1,000 births than in 1895.

Of the total deaths 38 were over the age of 65.

There were 5 deaths from zymotic diseases, distributed as follows:—Scarlatina, 2; enteric fever, 2; and measles, 1.

The largest number of deaths (34) were registered in the third quarter of the year, the first quarter presenting 32 and the second and fourth 24 each.

Improvements. New sink and drain at Mackennay's Cottage, Eachwick. New sinks provided at Dalton and the cesspools removed. Closure of 15 insanitary cottages at Kenton Long Row. Sewerage improvements at Fawdon Square, Ponteland, and Stamfordham. Plans for the purification of the sewage at both of these places have been adopted.

Requirements. New ashpits and privies for seven houses at Whalton Village, North Side, belonging to Lord Decies. New water supply for Dalton. Spouting and drainage for rain water at Stamfordham Presbytery. New privies, ashpit, and sink at Callerton Lane End. Better drainage for two houses at Nesbitt.

GLENDALE.

Medical Officer of Health—ROBERT WALKER, M.D.

Area, 147,698 acres; Estimated population 1896, 10,156; Birth rate, 22·94; Death rate, 11·81; Zymotic death rate, 0·29.

Infant mortality rate per 1,000 births, 68·67; Phthisis death rate, 1·28; Death rate from respiratory diseases, 0·59.

The birth rate is higher by 2·57 than in 1895.

The general death rate and the zymotic death rate are both lower than in 1895, when they were 14·17 and 0·59 respectively.

The infant mortality rate is 27·95 per 1,000 births lower than in 1895.

The number of deaths from zymotic diseases was 3, viz.:—Whooping cough, 2; and diarrhoea, 1.

Improvements. New houses built at Wooler, and various general improvements have been made. New cottages throughout the district either built or in progress, while many have been enlarged and re-modelled. Completion of the new drainage scheme at Lowick, and improved drainage for the cattle folds at Lilburn Grange. Enlargement and improvement of cottages at Mardon and Akeld steads. Extension of sewer at East Lilburn, which, however, contrary to the Rivers Pollution Prevention Act, is now made to deliver into the mill race. New sewers or drains at Roddam Home farm, Roddam Rigg, Pawston, Shotton, High Haugh Head, Goldsleugh, Doddington, The Hagg, Blinkbonny, and West Moneylaws. New privies and ashpits at Westwood Hill, Pawston, Shining Pool, Ilderton, Goldsleugh, Way to Wooler, West Moneylaws, Milfield, and Bowsden Hall farm. New water supplies have been provided at Shotton, Thornington, Heatherslaw, Old Bewick school and cottages, Ford Hill, and Lilburn Grange. An unsatisfactory well at Fowberry Moor has been closed. Covering of open drains at Chillingham New Town. The drainage of the village of Etal is being improved. The shepherd's house at Heddon, on the farm of Brandon, has been closed. The District Council have ordered important alterations and additions to the sewerage of Wark, and have decided to bring a new water supply to Flodden Lodge and Linthaugh farm.

Requirements. An isolation hospital and disinfectory. A public slaughter house for Wooler. Greater attention to the sanitary condition of cow-byres and places for storing milk, many of which are totally unfit for use in their present condition. A new water supply for the farms of East and West Horton, and additional precautions against the pollution of water supplies. A new sewer for Wark, and many other improvements for the same village, all of which have already been ordered by the Council. Improvements in the construction of ashpits at Wooler, Wark, and other places, which cannot be kept clean on account of their size, depth, bad floors, and want of roofs; many cottages in Lowick and other parts of the district have none. Improvement in cottages at Weetwood Hill.

HALTWHISTLE.

Medical Officer of Health—R. BOUSTEAD, L.R.C.P., L.R.C.S., D.P.H., L.M.

Area, 96,333 acres; Estimated population 1896, 7,996; Birth rate, 28·76; Death rate, 14·13; Zymotic death rate, 1·12; Infant mortality per 1,000 births, 86·95; Phthisis death rate, 1·12; Death rate from respiratory diseases, 2·12.

The birth rate is 4·25 higher than in 1895.

The general death rate and the zymotic death rate are both higher than in 1895, when they were 13·70 and 0·50 respectively.

The infant mortality rate is lower than 1895, when it was 97·43.

There were 9 deaths from zymotic diseases, viz.:—Diphtheria, 3; enteric fever, 2; and whooping cough, 4.

The school at Bellingham was closed owing to an outbreak of measles.

The Medical Officer of Health adopts the most important plan of dividing his district into localities, and appends some interesting tables, in which are set out the number of deaths from every cause, the ages at which they occurred, the localities in which they took place, and the number and nature of infectious diseases assigned to each locality. The value of these statistics would be still further increased if the estimated population of each locality were added, so that the attack rate and death rate for each could be worked out.

Improvements. The water supply is still kept good and abundant for most of the district, and in the country districts much good has been done by preserving and protecting the supplies to the wells, &c., from pollution—a most important point. The privies and ashpits are being attended to much more efficiently than formerly, and some have been re-constructed on more rational principles.

Requirements. An isolation hospital and disinfectory, increased water supply for some of the country districts, and in some cases scavenging to be carried out more frequently. The Medical Officer's report should be printed.

HEXHAM.

Medical Officer of Health—R. BOUSTEAD, L.R.C.P., L.R.C.S., D.P.H., L.M.

Area, 200,977 acres; Estimated population, 1896, 27,942; Birth rate, 26·37; Death rate, 13·92; Zymotic death rate, 0·93; Infant mortality rate per 1,000 births, 99; Phthisis death rate, 1·72; Death rate from respiratory diseases, 1·89.

The birth rate is practically the same as in 1895, the general death rate is slightly lower than in 1895, while the zymotic death rate is a shade higher. The infant mortality rate is lower, having been 115·61 in 1895.

The number of deaths from zymotic diseases is 26, viz.:—Scarlatina, 3; diphtheria, 8; enteric fever, 3; measles, 9; whooping cough, 6; and diarrhoea, 2.

The Medical Officer of Health adopts the most important plan of dividing his district into localities, and appends some interesting tables, in which are set out the number of deaths from every cause, the ages at which they occurred, the localities in which they took place, and the number and nature of infectious diseases assigned to each locality. The value of these statistics would be still further increased if the estimated population of each locality were added, so that the attack rate and death rate for each could be worked out.

Improvements. Improved water supply at many places, notably Newbrough, Acomb, Hedley on the Hill, Barrasford, Ovington, and Ovingham. Water supplies for Great Whittington, Allendale, and Haydon Bridge are under consideration, and it is expected that the work will be shortly completed. Some houses unfit for human habitation (at Wylam) have been demolished, and a considerable number of artisans' houses have been built and occupied.

Requirements. An isolation hospital and disinfectory. A new water supply for Slaley. Improved methods in the disposal of sewage in many places.

MORPETH.

Medical Officer of Health—W. CLARKSON, L.R.C.P., L.F.P.S.

Area, 74,950 acres; Estimated population, 1896, 15,068; Birth rate, 26·87; Death rate, 13·27; Zymotic death rate, 0·99; Infant mortality rate per 1,000 births, 133·33; Phthisis death rate, 1·19; Death rate from respiratory diseases, 1·12.

The birth rate is 9·95 lower than in 1895. The general death rate and the zymotic death rate are both lower than in 1895, when they were respectively 17·91 and 1·69.

The infant mortality is also lower, the difference being 41·40 per 1,000 births.

The number of deaths from zymotic diseases was 15, as against 39 in 1895. They were distributed as follows:—Scarlet fever, 3; diphtheria, 3; continued fever, 1; measles, 3; whooping cough, 4; and diarrhoea, 1.

There were 33 notifications of infectious diseases, comprising enteric fever, 1; diphtheria, 4; scarlatina, 20; puerperal fever, 1; and erysipelas, 7.

Improvements. Accompanying this report is one from the sanitary inspector, which enumerates many important sanitary advances, among which may be mentioned:—Considerable improvement in the methods of sewage disposal at Middleton, Netherwitton, Longhorsley, Hepscott Station, Hepscott Tiledsheds, and Moor Farm, Cottingwood Lane, Chevington School, Widdrington, Bothal Village, Bothal Castle, Longhirst, Humblespeth Farm, and Cockle Park. New water supplies for Espley Hall, Heighley Gate, Heighley Farm, Cockle Park, Ulgham Cockles, Lough House, and Ellington Moor. Improved water supply at Ulgham Grange, Globe Farm, Woodburn, and Broomhill Colliery. Additional ventilation at North Seaton infant school, &c.

Requirements. An isolation hospital and disinfectory. Removal of, or a great diminution in size, of the old middensteads in the colliery district. More attention to spouting and the prevention of dampness. The report of the Medical Officer of Health should be printed.

NORHAM AND ISLANDSHIRES.

Medical Officer of Health—J. PAXTON, JUN., L.R.C.P., L.R.C.S.

Area, 46,066 acres; Estimated population 1896, 6,366; Birth rate, 24·18; Death rate, 14·60; Zymotic death rate, 0·47; Infant mortality rate per 1,000 births, 123·37; Phthisis death rate, 1·57; Death rate from respiratory diseases, 2·04.

The birth rate is slightly higher than in the previous year.

The general death rate is 5·97 lower than in 1895, and the zymotic death rate is slightly lower.

The infant mortality rate is lower than in 1895 by 29·96 per 1,000 births.

The number of deaths from zymotic diseases was 3, viz.:—Diphtheria, 1; enteric fever, 1; and diarrhoea, 1.

Improvements. New or improved water supplies have been provided for the following places in the district:—Fenham Hill Farm, Fenwick Village, Windmill Hill, Cheswick Farm, Tindal House, and Tiptoe, and the attention of the council is being directed to the supplies at Billy Law, Buckton, and Felkington. At the Bow Well Spring the surrounding wall fence has been re-built, and a door put on with a lock to it. The provision of new concrete sewers at Scremerston Town Farm, a new six inch sewer at Horncliffe, the trapping of six open gratings at Norham, the completion of a new sewer on the north side of the village at Cornhill, the extension of the open concrete sewers at West Heaton, and the abatement of over-crowding at the same place. The building of new piggeries, privies, and ashpits at Norham West Mains. The building of new privies (one for each house) at Duddo. The provision of a new cement floor, spouting, ashpit, and privy for a house at East Ord, where two cases of diphtheria had occurred.

Requirements. Isolation hospital and disinfectory. The report of the Medical Officer of Health should be printed.

ROTHBURY.

Medical Officer of Health—F. BARROW, M.R.C.S., L.S.A.

Area, 166,959 acres; Estimated population, 1896, 4,800; Birth rate, 27·20; Death rate, 16·87; Zymotic death rate, 0·62; Infant mortality rate per 1,000 births, 76·33; Phthisis death rate, 1·25; Death rate from respiratory diseases, 0·83.

The birth rate is 5·29 per 1,000 higher than it was in 1895.

The general death rate is higher than in 1895, when it was only 12·33.

The zymotic death rate also shows an increase, being 0·62, as compared with 0·33 in 1895.

The number of deaths from zymotic diseases was 3, all of which were caused by diarrhœa.

Of the total number of deaths (81), 25 were over the age of 65, and 10 under one year.

The infant mortality rate is very slightly higher than in 1895.

The Medical Officer adopts the very admirable plan of dividing his district for statistical purposes into 10 localities, with the estimated population of each, and also the number of deaths, causes, age period at which such deaths occurred, and death rates for each sub-division of the sanitary district. These calculations entail a considerable amount of time and trouble, but they materially add to the value of a report, and in the present case, in addition to other information, enable one to see, as Dr. Barrow remarks, that "Whittingham distinctly shows the beneficial results of improvements carried out." Appended to this report there is also a table giving the amount of rainfall for each month of the year, from which it appears that the rainfall for 1896 exceeded the average by more than 6 inches; that October and December were by far the wettest months, and that February, April, May, and January were, in the order placed, those during which the least amount of rain was registered.

Improvements. A proper water supply has been laid down at the Chirnells. The Thropton water supply has been greatly improved by shifting the tank to a level of 27½ feet higher up the field and enlarging it from 200 to 910 gallons. The abatement of a nuisance at Framlington Low Town by the diversion of drainage from a pond by the roadside and near to some houses. An insanitary water-closet at the Peels removed, and the drainage at the cottages rectified. Removal of nuisances at Thropton Hill, the manure heap shifted. Pigstyes drained away from the road. The provision of 5 new ash middens and privies at Whittingham. Two stables drained away from the public road at the former place and 2 at Elsdon. An improvement in the drainage at Harbottle to the extent of a new sewer for the west end. At Long Framlington a sewer has been laid down at the south end of the village, and all the houses near properly connected. The drainage at the school and the roadside drainage have been put right.

Requirements. An isolation hospital and disinfecter. The extension of the water supply to the west end of Long Framlington. Abatement of a serious nuisance caused by the crude sewage from Glanton flowing into a ditch beside the public road. Provision of ash-middens or privies, or both, at the following places, viz., at the Peels Cottages, Banon Mill, Whittingham, Elsdon, Holystone, Alwinton, Long Framlington, Harbottle, Herdlaw, and Woodhall. The removal of two wooden privies and an ash-midden at Low Farnham, and the erection of suitable accommodation in a proper place. The alteration or re-construction of privies and ash-middens at Netherton buildings. Spouting is required at Thropton, Holystone, Long Framlington, and Alwinton. Properly trapped

sinks for six houses at Whittingham. A damp house at Whittingham (occupied by Miller) should be dried by draining and removing soil at the back. The depositing of ashes on the village green at Elsdon should be stopped, and two drains opening on to it should be diverted. Additional drainage and sink at Harbottle, disconnection of sinks and removal of old ash-midden by the roadside. The Medical Officer's report should be printed

TYNEMOUTH (No. 1.).

Medical Officer of Health—A. S. TAYLOR, L.R.C.P., L.R.C.S., L.M.,
L.F.P.S.

Area, 9,305 acres ; Estimated population, 1896, 11,906 ; Birth rate, 32·33 ; Death rate, 13·43 ; Zymotic death rate, 1·67 ; Infant mortality rate per 1,000 births, 124·67 ; Phthisis death rate, 0·75 ; Death rate from respiratory diseases, 1·84.

The birth rate is considerably lower than in 1895, when it was recorded at 38·28.

The general death rate and the zymotic death rate are both lower than in the previous year, when they were respectively 17·37 and 2·48.

The infant mortality rate is also lower, the difference being 24·33 per 1,000 births.

The number of deaths from zymotic diseases was 20, distributed as follows:—Enteric fever, 6 ; measles, 3 ; whooping cough, 8 ; and diarrhœa, 3.

Measles was very prevalent at Seaton Delaval and New Hartley. At the former place the infant school was closed, and at the latter it was deemed necessary to close the larger school as well. After this was done there was a marked subsidence in the number of cases.

Whooping cough was also very prevalent in several parts of the district.

The Medical Officer adopts the very admirable plan of dividing his district for statistical purposes, into seven localities, with the estimated population of each ; and also the number of deaths, causes, age period at which such deaths occurred, and birth rates, death rates (both general and from particular causes, and at different age periods) for each sub-division of the sanitary district. The information given in tables A and B is also assigned to the different sub-divisions of the district. A table is added from which can be seen at a glance the number and nature of all cases, notified from each locality, and the months during which such notifications were received. There is also a table giving particulars of all those deaths generally included under the head of "other causes," and in this also the number occurring in each locality is indicated. These calculations entail a considerable amount of time and trouble, but they materially add to the value of the report.

Improvements. Provision of new ashpits and privies at Old Hartley, and the laying of drains at the same place. New water supply for New Hartley by the Seaton Delaval Coal Company. Improvement in the water supply at Horton (New Delaval) by diverting it from a cattle drinking trough, and conveying it direct to new filter beds provided by the Seaton Delaval Coal Company. Provision of filter beds by the Cramlington Coal Company for Hartford East water supply. Privies and ashpits have been provided at Seaton Sluice for Lord Hastings' tenants. Ventilating shafts have been applied to the sewers at East Holywell Colliery, and various sanitary improvements effected at Old Seaton Terrace and Holywell Village.

Requirements. There is an urgent need in this densely populated district for an isolation hospital and disinfectory ; the effective separation of anyone suffering from infectious disease, and the other members of the family, being in a colliery house, absolutely impossible. In more than one portion of the district the colliery roads and footpaths call for more attention, and the large uncovered privy-ashpits should be emptied at much shorter intervals.

TYNEMOUTH (No. 2).

Medical Officer of Health—P. ALEXANDER, L.R.C.P., L.R.C.S., L.M.

Area, 10,519 acres; Estimated population, 1896, 15,943; Birth rate, 30·29; Death rate, 14·48; Zymotic death rate, 2·31; Infant mortality rate, per 1,000 births, 159·45; Phthisis death rate, 1·44; Death rate from respiratory diseases, 1·50.

The birth rate is lower than in the previous year, when it was 34·73.

The general death rate and the zymotic death rate are both lower than in 1895, when they were respectively 17·70 and 3·31.

There were 37 deaths from zymotic diseases, distributed as follows:—Scarlatina, 4; enteric fever, 3; measles, 4; whooping cough, 9; and diarrhœa, 17.

The infant mortality rate is 10·45 per 1,000 births higher than in 1895, although the number of deaths under 1 year is exactly the same, viz., 77. Of the total deaths (231) 45 were of persons over the age of 65.

There were 221 notifications of infectious diseases, of which 177 were scarlatina.

With respect to scarlatina the Medical Officer of Health says:—"The fever was generally very mild, so much so that many of the patients did not lay up in bed after the first two days. Isolation was not carried out for a sufficiently long period, hence the spread of cases over the whole year, from the year 1895."

The Medical Officer of Health adopts the very admirable plan of dividing his district for statistical purposes into four localities, with the estimated population of each, and also the number of births, deaths, causes of death, and age periods at which such deaths occurred, in each sub-division of the sanitary district. The information given in Tables A and B is also assigned to the different localities. A table is added from which can be seen at a glance the number and nature of all cases notified from each locality, and the months during which such notifications were received. These calculations entail a considerable amount of time and trouble, but they materially add to the value of the report. It is remarkable that only one case each of diphtheria and membranous croup were notified in this sanitary district during the year.

Improvements. The removal of refuse throughout the district was done much more efficiently, and with more regularity, and at shorter intervals than was the rule in former years. Extensions of sewers were carried out at West Moor, Benton, Burn Cottages, and sundry other places. Flushing tanks were erected at Benton. Extension of water mains, principally at Shiremoor and Backworth. Considerable repairs to the colliery houses of the older type, and the provision of spouting in many instances.

Requirements. Isolation hospital and disinfecter. Further repairs to the older houses and the provision of spouting. The re-construction of many privy ashpits of a most objectionable type.

